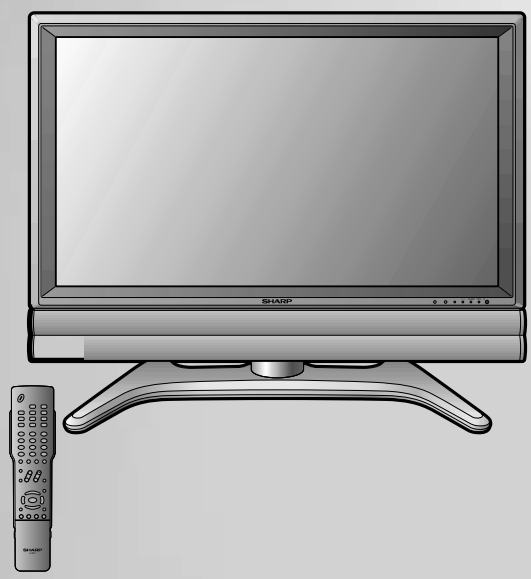
SHARP

LC-32GA3E

LCD COLOUR TELEVISION
LCD-FARBFERNSEHGERÄT
TÉLÉVISION COULEUR À ÉCRAN À CRISTAUX LIQUIDES (LCD)
TELEVISORE A COLORI LCD
LCD-KLEURENTELEVISIE
TELEVISORE A COLORI LCD

OPERATION MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUALE DI ISTRUZIONI
GEBRUIKSAANWIJZING
MANUAL DE MANEJO

AQUOS



VIRTUAL DOLBY SURROUND PRO LOGIC II

1bit Technology

ENGLISH
DEUTSCH
FRANÇAIS
ITALIANO
NEDERLANDS
ESPAÑOL

This apparatus complies with the requirements of Council Directives 89/336/EEC and 73/23/EEC as amended by Council Directive 93/68/EEC.

Dieses Gerät entspricht den Anforderungen der EG-Richtlinien 89/336/EWG und 73/23/EWG mit Änderung 93/68/EWG.

Ce matériel répond aux exigences contenues dans les directives 89/336/CEE et 73/23/CEE modifiées par la directive 93/68/CEE.

Dit apparaat voldoet aan de eisen van de richtlijnen 89/336/EEG en 73/23/EEG, gewijzigd door 93/68/EEG.

Dette udstyr overholder kravene i direktiv nr. 89/336/EEC og 73/23/EEC med tillæg nr. 93/68/EEC.

Quest' apparecchio è conforme ai requisiti delle direttive 89/336/EEC e 73/23/EEC, come emendata dalla direttiva 93/68/EEC.

Αυτή η συσκευή συμμορφώνεται με τις απαιτήσεις των οδηγιών του Συμβουλίου 89/336/ΕΟΚ και 73/23/ΕΟΚ όπως τροποποιήθηκαν από την οδηγία του Συμβουλίου 93/68/ΕΟΚ.

Este equipamento obedece às exigências das directivas 89/336/CEE e 73/23/CEE, na sua versão corrigida pela directiva 93/68/CEE.

Este aparato satisface las exigencias de las Directivas 89/336/CEE y 73/23/CEE, modificadas por medio de la 93/68/CEE.

Denna utrustning uppfyller kraven enligt riktlinjerna 89/336/EEC och 73/23/EEC så som kompletteras av 93/68/EEC.

Dette produktet oppfyller betingelsene i direktivene 89/336/EEC og 73/23/EEC i endringen 93/68/EEC.

Tämä laite täyttää direktiivien 89/336/EEC ja 73/23/EEC vaatimukset, joita on muutettu direktiivillä 93/68/EEC.

Bu cihaz Konsey Direktifi 93/68/EEC tarafindan düzeltilen 89/336/EEC ve 73/23/EEC Konsey Direktiflerinin gerekliliklerine uygundur.

Tento přístroj je v souladu s požadavky směrnic rady 89/336/EEC a 73/23/EEC, tak jak byly upraveny směrnicí rady 93/68/EEC.

See seade on vastavuses Nõukogu Direktiivis nr 89/336/EEC ja 73/23/EEC esitatud nõuetega, vastavalt Nõukogu Direktiivis nr 93/68/EEC esitatud parandustele

Ez a készülék megfelel a Tanács által kiadott, 89/336/EGK és 73/23/EGK Irányelveknek és az utóbbit módosító 93/68/EGK Irányelvnek

Ši ierice atbilst tehniskam prasibam pec 89/336/EEC un 73/23/EEC direktivam papildinats ar direktivu 93/68/EEC.

Šis prietaisas atitinka ES Tarybos direktyvu 89/336/EEC ir 73/23/EEC patikslintos direktyvos 93/68/EEC reikalavimus.

To urządzenie spełnia wymagania dyrektyw 89/336/EEC i 73/23/EEC wraz z poprawkami dyrektywy 93/68/EEC.

Tento prístroj je v súlade s požiadavkami smerníc rady 89/336/EEC a 73/23/EEC tak ako boli upravené smernicou rady 93/68/EEC.

Ta aparat je v skladu z zahtevami Direktiv Sveta 89/336/EEC in 73/23/EEC kot je navedeno v dopolnilu k Direktivi Sveta 93/68/EEC.

SPECIAL NOTE FOR USERS IN THE U.K.

The mains lead of this product is fitted with a non-rewireable (moulded) plug incorporating a 13A fuse. Should the fuse need to be replaced, a BSI or ASTA approved BS 1362 fuse marked ♆ or ◈ and of the same rating as above, which is also indicated on the pin face of the plug, must be used.
Always refit the fuse cover after replacing the fuse. Never use the plug without the fuse cover fitted.
In the unlikely event of the socket outlet in your home not being compatible with the plug supplied, cut off the mains plug and fit an appropriate type.

DANGER:
The fuse from the cut-off plug should be removed and the cut-off plug destroyed immediately and disposed of in a safe manner.
Under no circumstances should the cut-off plug be inserted elsewhere into a 13A socket outlet, as a serious electric shock may occur.
To fit an appropriate plug to the mains lead, follow the instructions below:

IMPORTANT:
The wires in the mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this product may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
- The wire which is coloured blue must be connected to the plug terminal which is marked N or coloured black.
- The wire which is coloured brown must be connected to the plug terminal which is marked L or coloured red.

Ensure that neither the brown nor the blue wire is connected to the earth terminal in your three-pin plug.
Before replacing the plug cover make sure that:
- If the new fitted plug contains a fuse, its value is the same as that removed from the cut-off plug.
- The cord grip is clamped over the sheath of the mains lead, and not simply over the lead wires.

IF YOU HAVE ANY DOUBT, CONSULT A QUALIFIED ELECTRICIAN.

LC-32GA3E

LCD COLOUR TELEVISION

ENGLISH

ENGLISH

OPERATION MANUAL

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Dear SHARP customer

Thank you for your purchase of the SHARP LCD colour TV product. To ensure safety and many years of trouble-free operation of your product, please read the Important Safety Precautions carefully before using this product.

Important Safety Precautions

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD colour TV product, please read the following precautions carefully before using the product.

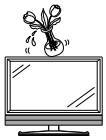
1. Read instructions—All operating instructions must be read and understood before the product is operated.
2. Keep this manual in a safe place—These safety and operating instructions must be kept in a safe place for future reference.
3. Observe warnings—All warnings on the product and in the instructions must be observed closely.
4. Follow instructions—All operating instructions must be followed.
5. Attachments—Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
6. Power source—This product must operate on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company.
7. AC cord protection—The AC cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
8. Overloading—Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
9. Entering of objects and liquids—Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
10. Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
11. Repair—If any of the following conditions occurs, unplug the AC cord from the AC outlet, and request a qualified service person to perform repairs.
    a. When the AC cord or plug is damaged.
    b. When a liquid was spilled on the product or when objects have fallen into the product.
    c. When the product has been exposed to rain or water.
    d. When the product does not operate properly as described in the operating instructions.
    Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
    e. When the product has been dropped or damaged.
    f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
12. Replacement parts—In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
13. Safety checks—Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
14. Wall or ceiling mounting—When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.

Important Safety Precautions

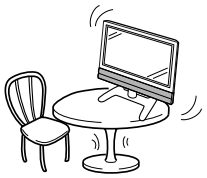
- Cleaning—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.

- Water and moisture—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.

- Do not place vases or any other water-filled containers on this product.
  The water may spill onto the product causing fire or electric shock.

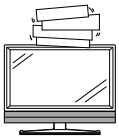


- Stand—Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.

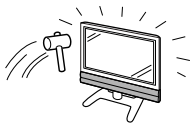


- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.

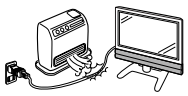
- Ventilation—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



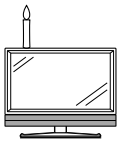
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impact applied. If the LCD panel is broken, be careful not to be injured by broken glass.



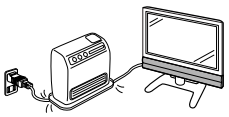
- Heat sources—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).



- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.



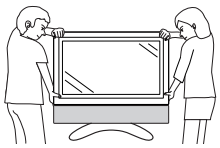
- To prevent fire or shock hazard, do not place the AC power cord under the TV set or other heavy items.



The LCD panel is a very high technology product with 3,147,264 thin film transistors, giving you fine picture details.
Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red.
This is within product specifications and does not constitute a fault.

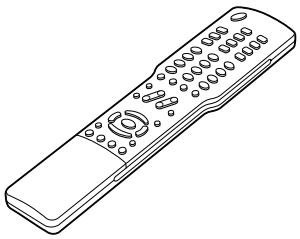
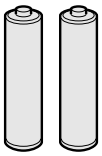
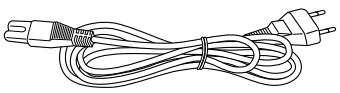
Precautions when transporting the TV

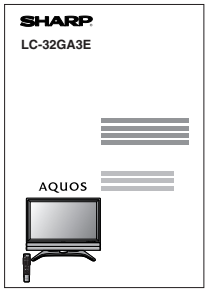
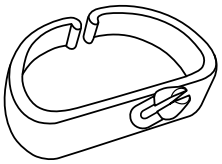
When transporting the TV, never carry it by holding onto the speaker. Be sure to always carry the TV by two people holding it with two hands—one hand on each side of the display.



Supplied accessories

Make sure the following accessories are provided with the product.

Remote control unit (×1)	“AAA” size battery (×2)	AC cord (×1)
		
Page 13	Page 8	Product shape varies in some countries. Page 6

Operation manual	Cable clamp (×1)
	
	Page 6

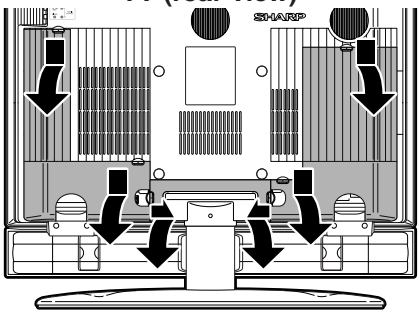
Preparation

Setting the TV

After putting the TV in place, connect the AC cord.

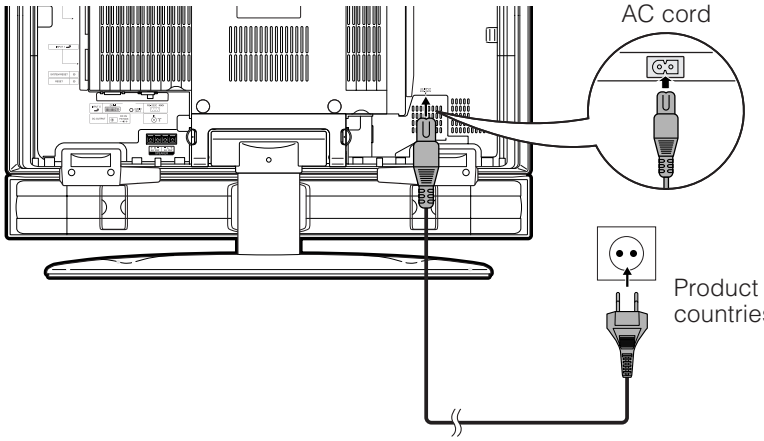
1 Removing the terminal cover

TV (rear view)



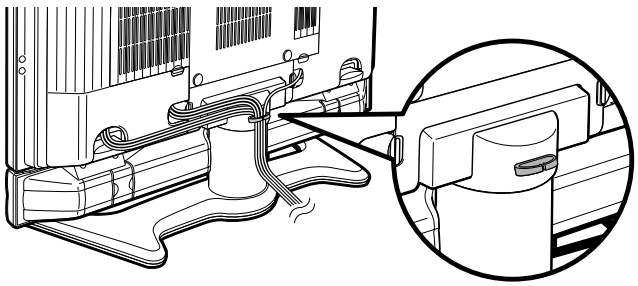
Press down the hooks to remove the cover toward you.

2 Connecting the AC cord to the TV



Product shape varies in some countries.

3 Bundling the cables



CAUTION

- **TO PREVENT RISK OF ELECTRIC SHOCK, DO NOT TOUCH UN-INSULATED PARTS OF ANY CABLES WITH THE AC CORD CONNECTED.**

CAUTION

Adjust the screen with both hands. Put one hand on the Display and tilt the screen while steadying the stand with your other hand.
You can adjust the screen vertically up to 2 degrees forward or 6 degrees backward, or rotate 20 degrees horizontally.

Removing the stand and speaker

This unit has detachable type speaker.

You can detach the system speaker when using external speaker.
Before removing (or attaching) speaker, unplug the AC cord from the AC outlet.

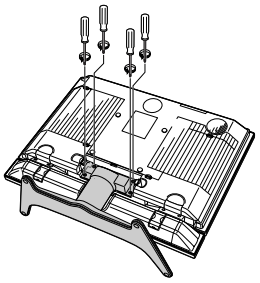
CAUTION

- **Do not remove the stand and speaker from the TV unless using an optional bracket to mount it.**
- **When using the TV with the supplied stand attached, do not remove the speaker. Doing so may disturb the balance leading to product damage or personal injury.**

Before attaching/removing speaker

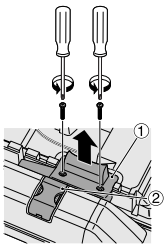
- Before performing work make sure to turn off the TV.
- Before performing work spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

1



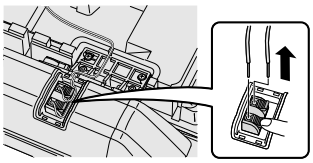
Unfasten the screws used to secure the stand in place, and then detach the stand from the Display. (Hold the stand so it will not drop the stand from the edge of the base area.)

2



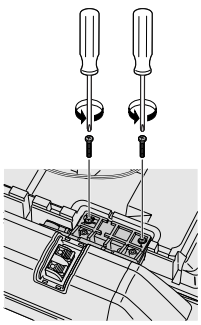
① Unfasten the screws used to secure the speaker bracket covers, and then detach them.
② Take off the speaker terminal cover.

3



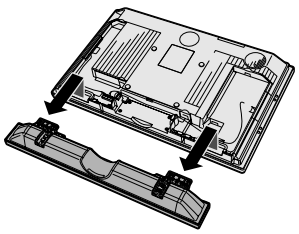
Disconnect the cable from the speaker.

4



Unfasten the screw used to secure the speaker bracket.

5



Now the speaker can be removed from the Display.

- Perform the steps 2 to 4 on the both sides of the speaker to remove it.

CAUTION

- The speaker terminals on the TV are only for the attached speaker. Do not connect any third party plug or speaker to the terminal.
- Insert the speaker plug completely into the terminal.

NOTE

- To attach the speaker and stand, perform the above steps in reverse order.

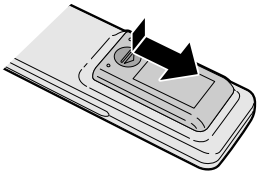
Setting the TV on the wall

CAUTION

- **Installing the LCD Colour TV requires special skill that should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.**
- You can ask a qualified service personnel about using an optional AN-37AG2 bracket to mount the TV to the wall.

Inserting the batteries

Before using the TV for the first time, insert two “AAA” size batteries (supplied). When the batteries become depleted and the remote control fails to operate, replace the batteries with new “AAA” size batteries.



1 Press and slide the battery cover to open it.

2 Insert two supplied “AAA” size batteries.
- Place batteries with their terminals corresponding to the (+) and (−) indications in the battery compartment.

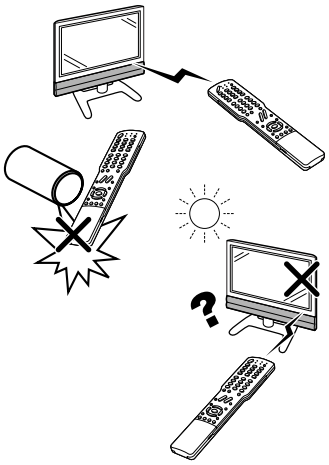
3 Close the battery cover.

CAUTION

Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.

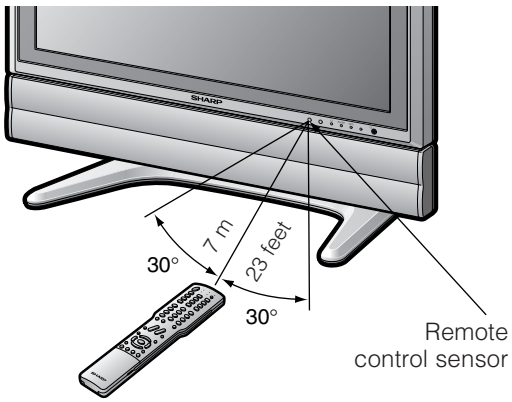
Using the remote control unit

Use the remote control unit by pointing it towards the remote sensor window. Objects between the remote control unit and sensor window may prevent proper operation.



Cautions regarding remote control unit

- Do not expose the remote control unit to shock.
  In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight.
  The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote sensor window of the Display is under direct sunlight or strong lighting. In such case, change the angle of the lighting or Display, or operate the remote control unit closer to the remote sensor window.

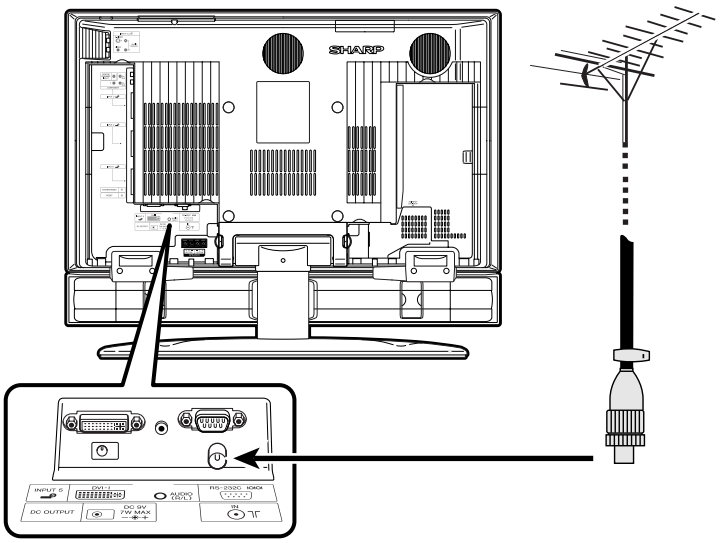


Simple operations for watching a TV programme

Basic connection

Connecting to an antenna

To enjoy a clearer picture, use an outdoor antenna. The following is a brief explanation of connecting to an antenna with a coaxial cable.

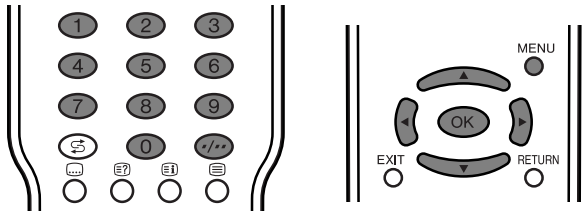


Antenna cables–commercially available

If your outdoor antenna uses a 75-ohm coaxial cable with a standard DIN45325 plug (IEC 169-2), plug it into the IN terminal at the rear of the TV.

Initial auto installation

When the TV powers on for the first time after purchase (see page 14), the initial auto installation is invoked. You can automatically set language, country and channels in successive operations.



NOTE

- The initial auto installation functions only once. If the initial auto installation is not completed, (ex: When menu screen disappeared by not operating for a few minutes, when the power shut down, etc.), try Auto Installation from the set up menu. (See page 20.)
- The initial auto installation stops by pressing **RETURN**.

1

Setting the on-screen display language

① Press ▲/▼/◀/▶ to select the desired language listed on the screen.
② Press **OK** to enter the setting.

Language list

Dutch	Polish
English	Portuguese
Finnish	Russian
French	Spanish
German	Swedish
Greek	Turkish
Italian	

2

Setting the country or area

① Press ▲/▼/◀/▶ to select your country or area listed on the screen.
② Press **OK** to enter the setting.

- The programme auto search starts at the same time.

Country list

Austria	Poland
Belgium	Portugal
Denmark	Russia
Finland	Spain
France	Sweden
Germany	Switzerland
Greece	Turkey
Ireland	United Kingdom
Italy	West Europe
Luxembourg	East Europe
Netherlands	
Norway	

After this setting, auto search starts with the following order.

① Programme auto search
② Auto labelling
③ Auto sorting
④ Preset download

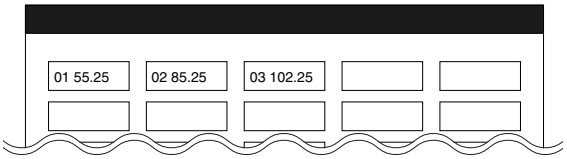
You do not need to do anything during the auto search.

NOTE

- The illustrations and on-screen displays in this manual are for explanation purposes and may vary slightly from the actual operations.

Automatic channel searching

Channel auto search finds all channels viewable in your area.



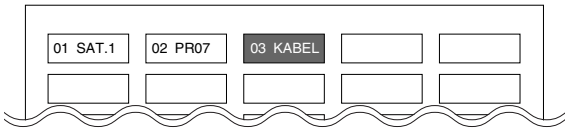
NOTE

- If no channel is found, “No programme found.” displays. And the auto installation finishes.

⬇

Automatic channel labelling

After finding TV channels, the TV starts naming each TV channel found.



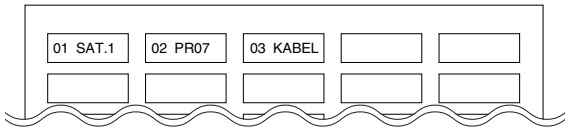
NOTE

- The TV can only name channels where the channel labelling information is provided. If no channel labelling information is provided, the TV only displays the channel number, leaving the channel name blank.

⬇

Automatic channel sorting

When channel auto labelling finishes, the TV starts sorting the labelled channels.



⬇

Preset download

When auto sorting finishes, the TV automatically downloads and stores each sorted channel from VCR.

- When a VCR is connected via INPUT 2, the TV sends all preset channel information to the VCR. (See page 32.)
- “Auto Installation completed.” displays. After that, the screen changes to the auto installation menu.

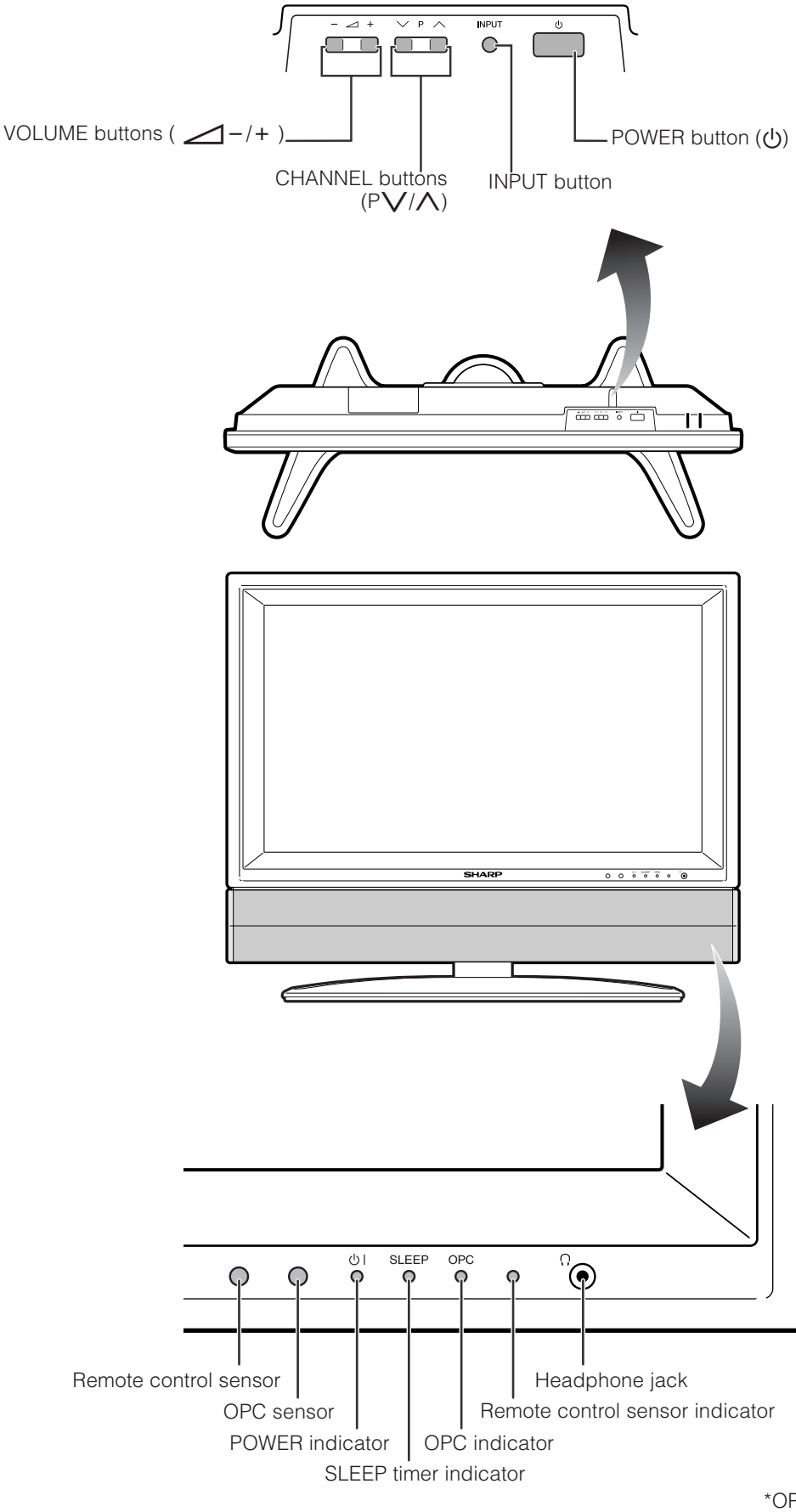
⬇

Watching TV

The setup menu disappears and you can watch the programme on channel 1.

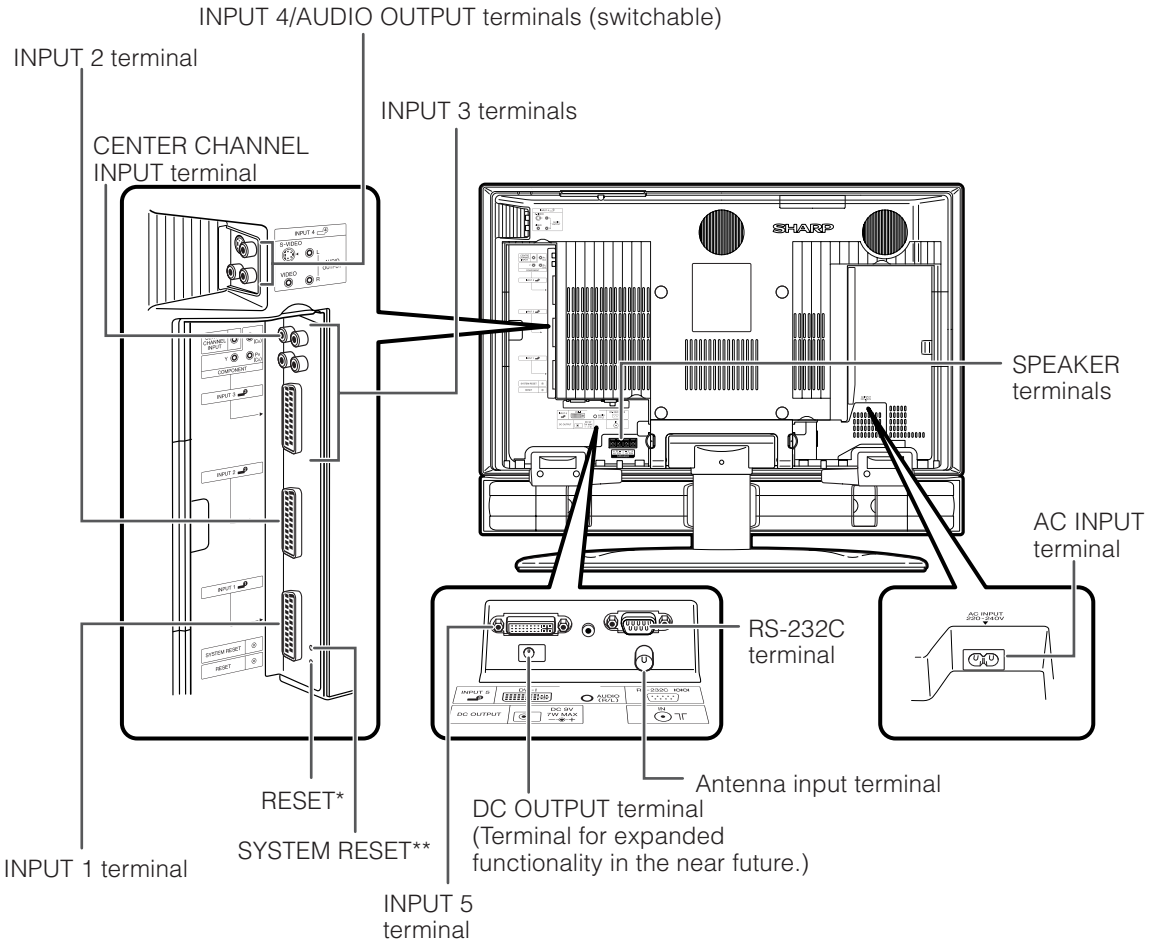
Part names

TV



*OPC: Optical Picture Control
(See page 25.)

TV



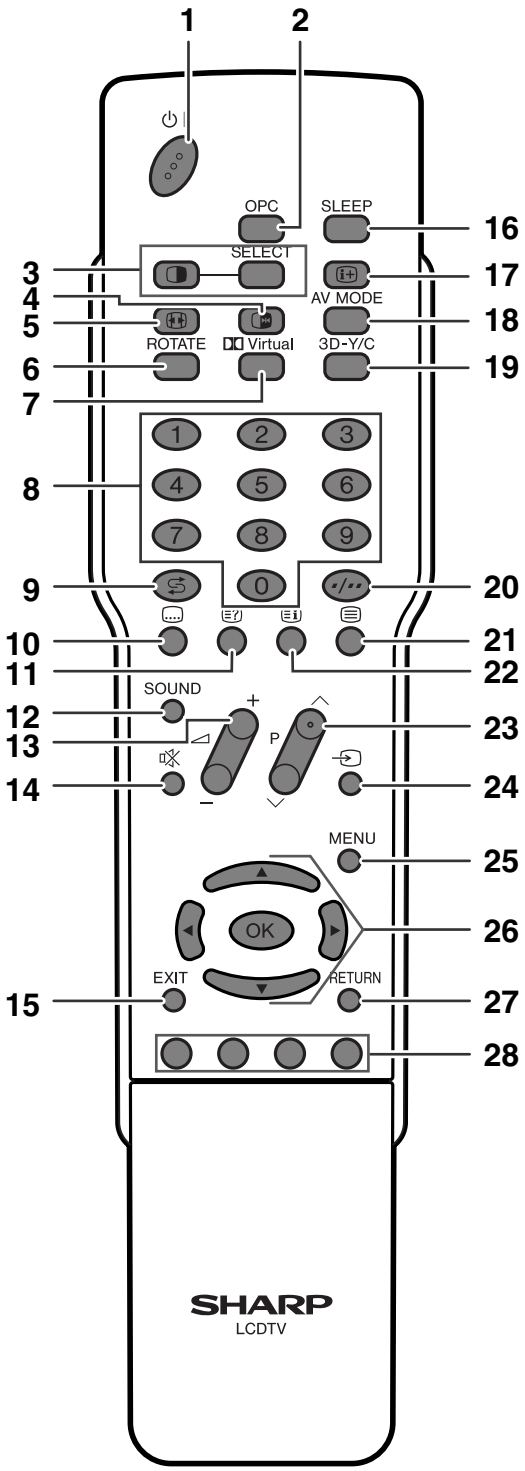
***** Press **RESET** if the TV cannot return to its original state after performing various operations.
- AV MODE resets to USER.
- Analogue TV channel resets to channel 1.
- Dual picture resets to normal.
- Audio setting initializes.
- Dolby Virtual resets to Off.
- Image position initializes.

****** Press **SYSTEM RESET** if the TV does not operate after starting up.

NOTE

- Pressing **RESET** will not work if the TV is in standby mode (indicator lights red).
- Pressing **RESET** will not delete channel preset and PIN. See page 46 for resetting the PIN when you know it. See page 58 for initializing to the factory preset values when you forget your PIN.

Remote control unit



NOTE

- When using the remote control unit, point it at the Display.

1 **(STANDBY/ON)**
To switch the power on and off. (See page 14.)

2 **OPC**
To switch the Optical Picture Control on and off. (See page 25.)

3 **(DUAL screen)**
Set the dual picture mode. Press again to return to normal view. (See page 48.)
SELECT
To select either screen to be active in Dual screen mode.

4 **(FREEZE/HOLD)**
TV/External input mode: Change the still image mode.
TELETEXT mode: Freeze a multi-page on screen while other pages are automatically updated. Press again to return to the normal image. (See pages 48 and 49.)

5 **(WIDE MODE)**
TV/External input mode: Change the wide image mode. (See pages 41 and 42.)
TELETEXT mode: Set the area of magnification. (full/upper half/lower half) (See page 49.)

6 **ROTATE**
Rotates the display in every direction. (See page 44.)

7 **Virtual**
Select Virtual Dolby Surround settings. (See page 17.)

8 **0 – 9**
TV/External input mode: Set the channel.
TELETEXT mode: Set the page.

9 **(Flashback)**
Press to return to the previous image in normal viewing mode. (See page 15.)

10 **(SUBTITLE for TELETEXT)**
TV/External input mode: To turn the subtitles on and off. (See page 50.)

11 **(Reveal hidden for TELETEXT)**
TELETEXT mode: Display hidden characters. (See page 49.)

12 **SOUND**
Select the sound multiplex mode. (See page 16.)

13 **– / + (VOLUME)**
Set the volume. (See page 16.)

14 **(MUTE)**
Mute the sound. (See page 17.)

15 **EXIT**
Turn off the On Screen Display.

16 **SLEEP**
Set the Sleep timer. (See page 45.)

17 **(DISPLAY INFORMATION)**
Display the programme information.

18 **AV MODE**
Select a video setting: AV MODE (STANDARD, MOVIE, GAME, USER, DYNAMIC), PC MODE (STANDARD, USER) (See page 40.)

19 **3D–Y/C**
To switch the 3D-Y/C function on and off. (See page 28.)

20 **-/-- (Digit for channel select)**
Change the digits of the selected TV channel. (See page 15.)

21 **(TELETEXT)**
Select the TELETEXT mode. (all TV image, all TEXT image, TV/TEXT image) (See pages 49 and 50.)

22 **(TOP Overview for TELETEXT)**
TELETEXT mode: Display an index page for CEEFAX/FLOF information. TOP Overview for TOP programme. (See page 50.)

23 **P∧/P∨**
TV/External input mode: Select the channel or switch to either TV input mode.
TELETEXT mode: Set the page. (See page 49.)

24 **(INPUT SOURCE)**
Select an input source. (TV, INPUT 1, INPUT 2, INPUT 3, INPUT 4, INPUT 5) (See pages 31, 38, 39 and 48.)

25 **MENU**
Display the menu screen.

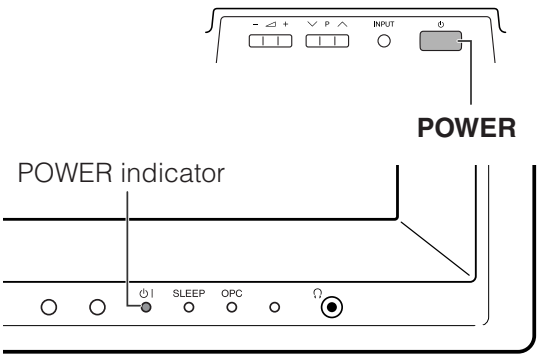
26 **▲/▼/◀/▶ (Cursor)**
Select a desired item on the setting screen.

OK
Execute a command.

27 **RETURN**
MENU mode: Return to the previous menu screen.

28 **Colour (RED/GREEN/YELLOW/BLUE)**
TELETEXT mode: Select a page. (See page 49.)

Watching TV



Turning on the power

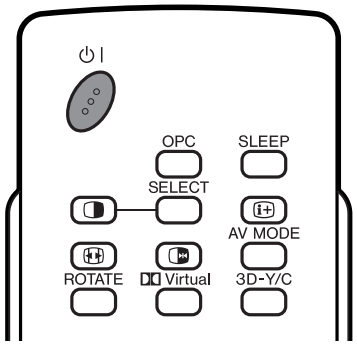
Press **POWER** on the TV.

- POWER indicator (Green): The TV is on. (After a few seconds, a window appears with sound.)

NOTE

- The initial setup starts when the TV powers on for the first time. If the TV has been turned on before, the initial auto installation will not be invoked. See page 20 to try Auto installation from the Setup menu.

Turning off the power



Press ⏻ | on the remote control.

- The TV enters standby mode and the image on the screen disappears.
- The POWER indicator on the TV changes from green to red.

Press **POWER** on the TV.

- The POWER indicator on the TV gradually turns off.
- When the TV is turned off by **POWER**, you cannot turn on the power by pressing ⏻ | on the remote control.

NOTE

- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the power outlet.
- Weak electric power is still consumed even when **POWER** is turned off.

Display status indicator

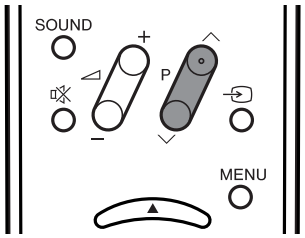
Off	Power off
Red	The TV is in standby mode.
Green	The TV is on.

Simple button operations for changing channels

You can change channels in several ways.

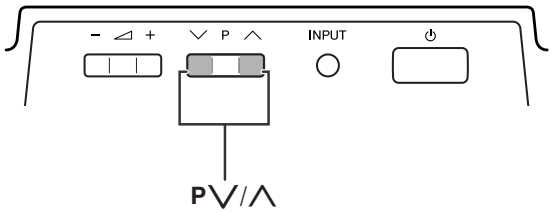
Using P∧/∨ on the remote control unit

- Press **P∧** to increase channel number.
- Press **P∨** to decrease channel number.



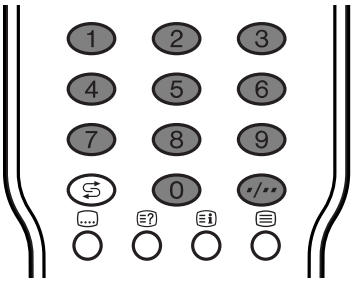
NOTE

- **P∨/∧** on the Display operates the same as **P∨/∧** on the remote control unit.



Using 0 – 9 on the remote control unit

Select the channels directly by pressing buttons **0** to **9**.



EXAMPLE

To select a 1-digit channel (e.g. channel 2):

- Press **2**. If "2" is indicated and the picture does not change immediately, press **-/--** to switch over to the 1-digit select mode and press **2** again.

To select a 2-digit channel (e.g. channel 12):

- Press **-/--** to set the 2-digit select mode. Press **1**, followed by **2**.

NOTE

- Complete this procedure within 3 seconds, otherwise the selection will not be made on the 2-digit channel mode.

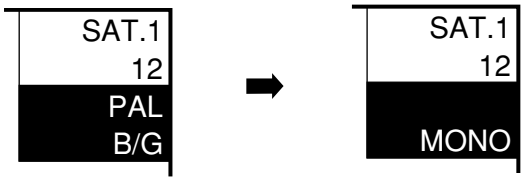
When viewing Teletext information

View a page directly which is 3-digit page number from 100 to 899 by pressing buttons **0** to **9**.

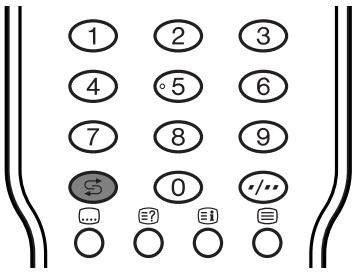
Channel display

Channel display changes approximately after 3 seconds as shown below.

(Example)



Using Flashback (⇆) on the remote control unit

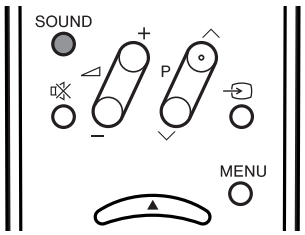


Press ⇆ to switch the currently tuned channel to the previously tuned channel.
Press ⇆ again to switch back to the currently tuned channel.

Press ⇆ to toggle between the currently selected input source and the previously selected one.

Press ⇆ to return to the previous page in TELETEXT mode.

Using SOUND on the remote control unit



In the NICAM TV broadcasts

When receiving a stereo signal
Each time you press **SOUND**, the mode switches between NICAM STEREO and MONO.

When receiving a bilingual signal
Each time you press **SOUND**, the mode switches among NICAM CH A, NICAM CH B, NICAM CH AB and MONO.

When receiving a monaural signal
Each time you press **SOUND**, the mode switches between NICAM MONO and MONO.

In the TV mode of A2 TV broadcasts

When receiving a stereo signal
Each time you press **SOUND**, the mode switches between STEREO and MONO.

When receiving a bilingual signal
Each time you press **SOUND**, the mode switches among CH A, CH B and CH AB.

When receiving a monaural signal
When you press **SOUND**, "MONO" displays.

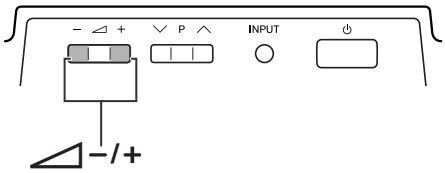
NOTE

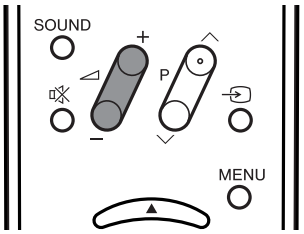
- When no signal is input, the sound mode will display "MONO".

Simple button operation for changing volume/sound

Changing the volume

You can change the volume on the Display or on the remote control unit.





- To increase the volume, press +.
- To decrease the volume, press −.

NOTE

- "TV", "INPUT1", "INPUT2", "INPUT3", "INPUT4" and "INPUT5" modes can each store volume adjustment values separately.

When "INPUT 4" is set to "Audio Out (Variable)", the indicator on the screen changes as shown below.

Audio status

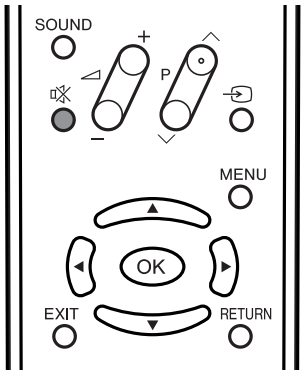
Output device	Audio out	
	Fixed	Variable
Speaker	Variable sound	Mute
AUDIO OUTPUT	Constant as specified	Variable sound

NOTE

- See page 45 for details on the audio out function.

Using 🔇 on the remote control unit

🔇 mutes the current sound output.



1 Press 🔇.

- "🔇" has been displayed on the screen for 30 minutes, and the sound is silenced.

Mute

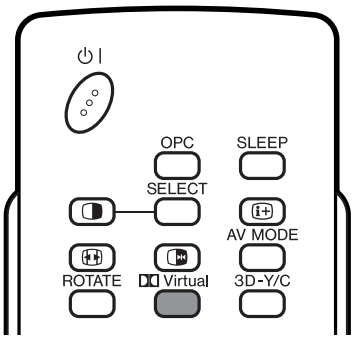
NOTE

- Within 30 minutes of pressing 🔇, mute can be cancelled by using the methods below.
  - Pressing ◿− / ◿+ or 🔇 can also cancel the mute.
- **Mute will be cancelled after 30 minutes have elapsed. However, the TV will not suddenly output a loud sound as the volume level is set to 0 automatically.**

2 Within 30 minutes, press 🔇 again to cancel the mute.

- Before 30 minutes, the volume level returns to the previous setting.
- After 30 minutes, increase the volume level by pressing ◿+.

Using DD Virtual on the remote control unit



DD Virtual produces Dolby Virtual effect from the speaker.
Each time you press **DD Virtual**, the mode changes between On and Off.

Dolby Virtual sound options

- On: Makes it possible to enjoy natural, realistic surround sound.
- Off: Outputs the normal sound.

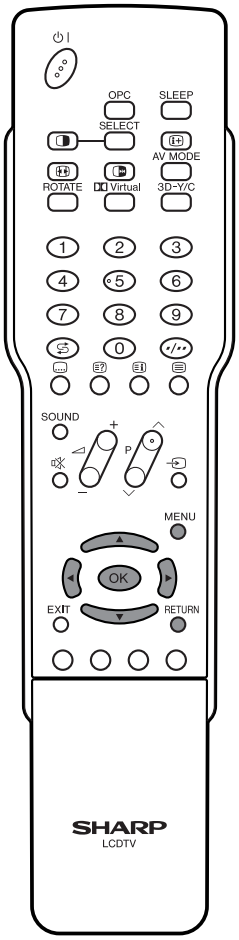
NOTE

- You can have the same settings by choosing "Dolby Virtual" on the menu items. (See page 29.)

Basic adjustment settings

Menu operation buttons

Use the following buttons on the remote control to operate the menu.



MENU: Press to open or close the menu screen.

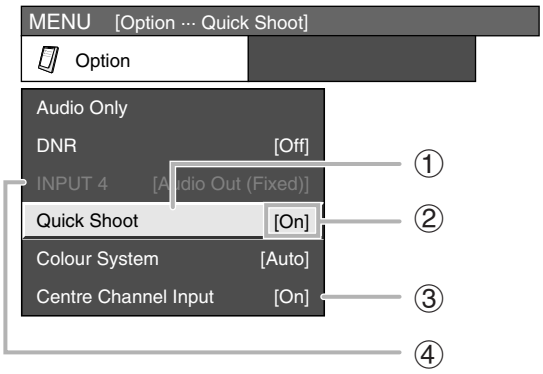
▲/▼/◀/▶: Press to select a desired item on the screen or adjust a selected item.

OK: Press to go to the next step or complete the setting.

RETURN: Press to return to the previous step.

On-Screen Display

Example



① Item displayed in yellow
- This indicates the item currently selected.
- Press **OK** to go to the adjustment screen for this item.

② Item in brackets
- This indicates the current setting for the item.

③ Item displayed in white
- This indicates an item can be selected.

④ Item displayed in grey
- This indicates the item cannot be selected.

*There are various reasons why items cannot be selected, but the main reasons are as follows:

1. Nothing is connected to the selected input terminal.
2. The function is not compatible with the current input signal.

NOTE

- Menu options differ in the selected input modes, but the operating procedures are the same.
- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.

TV/AV input mode menu items

List of AV menu items to help you with operations

Picture

OPC ..... Page 25
Backlight ..... Page 26
Contrast ..... Page 26
Brightness ..... Page 26
Colour ..... Page 26
Tint ..... Page 26
Sharpness ..... Page 26
Advanced
C.M.S. ..... Page 27
Colour Temp. ..... Page 27
Black ..... Page 27
3D-Y/C ..... Page 28
Monochrome ..... Page 28
Film Mode ..... Page 28
I/P Setting ..... Page 28

Audio

Treble ..... Page 29
Bass ..... Page 29
Balance ..... Page 29
Dolby Virtual ..... Page 29

Power Control

No Signal Off ..... Page 30
No Operation Off ..... Page 30

Setup

Auto Installation ..... Page 20
Programme Setup ..... Pages 20-24
Child Lock ..... Page 46
Input Label ..... Page 39
Speaker Setup ..... Page 36
Position ..... Page 37
WSS ..... Page 40
4:3 Mode ..... Page 40
Rotate ..... Page 44
Language ..... Page 25

Option

Audio Only ..... Page 37
DNR ..... Page 43
Input Select ..... Page 38
INPUT 4 ..... Page 45
Quick Shoot ..... Page 43
Colour System ..... Page 39
Centre Channel Input ..... Page 47

*PC input mode menu items

List of PC menu items to help you with operations

Picture

OPC ..... Page 25
Backlight ..... Page 26
Contrast ..... Page 26
Brightness ..... Page 26
Red ..... Page 26
Green ..... Page 26
Blue ..... Page 26
Advanced
C.M.S. ..... Page 27

Audio

Treble ..... Page 29
Bass ..... Page 29
Balance ..... Page 29
Dolby Virtual ..... Page 29

Power Control

Power Management ..... Page 30

Setup

Speaker Setup ..... Page 36
Input Signal ..... Page 43
Auto Sync. ..... Page 37
Fine Sync. ..... Page 38
Input Label ..... Page 39
Rotate ..... Page 44
Language ..... Page 25

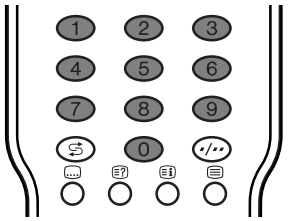
Option

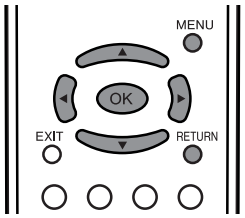
Audio Only ..... Page 37
Input Select ..... Page 38
INPUT 4 ..... Page 45
Quick Shoot ..... Page 43
Centre Channel Input ..... Page 47

*When INPUT5 is set to PC

Auto installation

You can run auto installation again, even after setting up the preset channels.

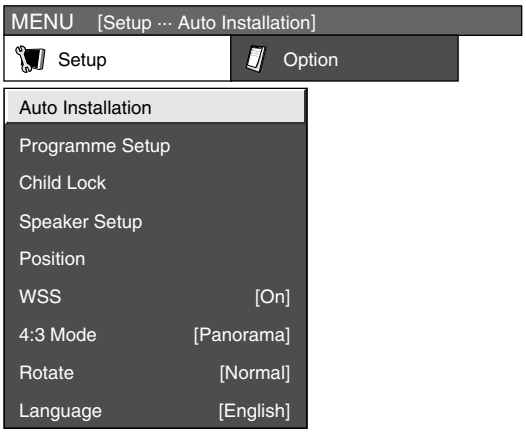




1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Auto Installation”, and then press **OK**.



4 If you already set the PIN, enter it here.
- See page 46 for setting PIN.

– – – –

5 Press ◀/▶ to select “Yes”, and then press **OK**.

6 You can set language and country the same as in the initial auto installation. Follow steps 1 and 2 on page 10. After this setting, auto search starts with the following order.
① Programme auto search
② Auto labelling
③ Auto sorting
④ Preset download
You do not need to do anything during the auto search.

NOTE

- Do not turn off the TV while the message “Auto Installation completed” is displayed, for the TV is saving the data found while the message is displayed.

Programme setup

You can run the auto installation procedure again at any time, by accessing the Setup menu, then Programme Setup. Channels can be tuned automatically or manually.

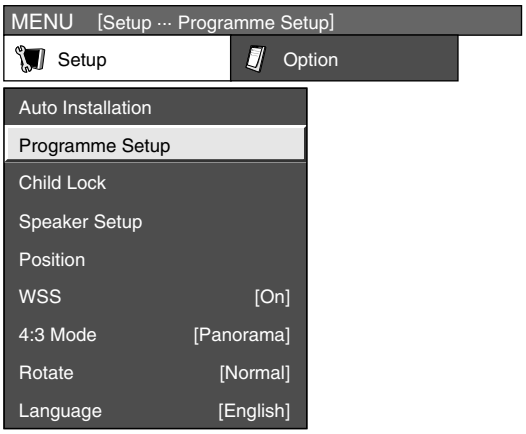
Auto search

You can also automatically search and download TV channels by performing the procedure below. This is the same function as from programme auto search to preset download in auto installation.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Programme Setup”, and then press **OK**.
If you already set the PIN, enter it here.
- See page 46 for setting PIN.



4 Press ▲/▼ to select “Auto Search”, and then press **OK**.

5 Press ◀/▶ to select “Yes”, and then press **OK**.
- Auto search starts with the following order.
① Programme auto search
② Auto labelling
③ Auto sorting
④ Preset download

NOTE

- See page 10 for details.
- Do not turn off the TV while the message “Programme set-up completed” is displayed, for the TV is saving the data found while the message is displayed.

Manual setting for each channel

You can set some channel items manually. They are Fine (TV frequency), Colour sys., Sound sys., Label (Network name), Skip, Decoder, Lock (Child Lock) and Booster.

1 Press **MENU** and the MENU screen displays.

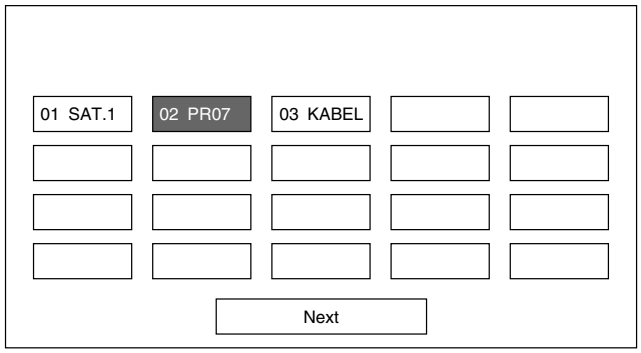
2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Programme Setup”, and then press **OK**.
If you already set the PIN, enter it here.
• See page 46 for setting PIN.

4 Press ▲/▼ to select “Manual Adjust”, and then press **OK**.

5 Press ◀/▶ to select “Yes”, and then press **OK**.

Programme Setup “Manual Adjust” menu



NOTE

• When you exit Programme Setup “Manual Adjust” menu, preset download automatically runs if you change information on that menu.

You can select one of the following settings.

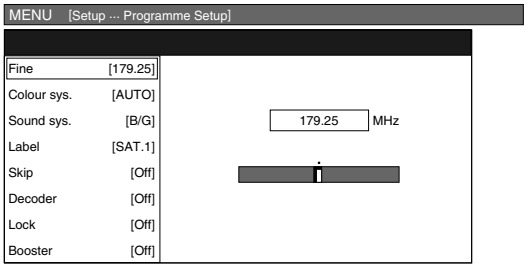
① Fine
② Colour system (See page 22.)
③ Sound system (See page 22.)
④ Label (See page 22.)
⑤ Skip (See page 23.)
⑥ Decoder (See page 23.)
⑦ Lock (See page 23.)
⑧ Booster (See page 23.)

Fine tuning

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
• The selected channel information displays.

2 Press ▲/▼ to select “Fine”, and then press **OK**.

3 Press ◀/▶ to adjust the frequency, and then press **OK**.
• Adjust while checking the background picture as a reference.



• Instead of the above, you can also set by directly entering the frequency number of the channel with **0** – **9**.

EXAMPLE

• 179.25 MHz: Press **1** → **7** → **9** → **2** → **5**.
• 49.25 MHz: Press **4** → **9** → **2** → **5** → **OK**.

Manual setting for each channel (continued)

Colour system

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Colour sys.”, and then press **OK**.
- Receivable colour systems are listed. (AUTO, PAL, SECAM, NTSC4.43, PAL-60)

3 Press ▲/▼ to select the optimum colour system, and then press **OK**.

Sound system (Broadcasting system)

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Sound sys.”, and then press **OK**.
- Receivable sound systems (Broadcasting systems) are listed. (B/G, D/K, I, L, L’)

3 Press ▲/▼ to select the optimum sound system, and then press **OK**.

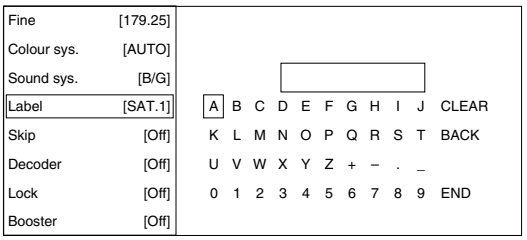
Labelling channels

When a TV channel sends its Network Name, the auto installation detects the information and assigns a name to it. However, you can change individual channel names.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Label”, and then press **OK**.
- Alphabets and numbers are listed.

Labelling menu


Fine [179.25]
Colour sys. [AUTO]
Sound sys. [B/G]
Label [SAT.1]
Skip [Off]
Decoder [Off]
Lock [Off]
Booster [Off]
A B C D E F G H I J CLEAR
K L M N O P Q R S T BACK
U V W X Y Z + – . _
0 1 2 3 4 5 6 7 8 9 END

3 Press ▲/▼/◀/▶ to select each character of the new name for the channel, and then press **OK**.

4 Repeat the above until the name is fully spelt out.
- The name can be 5 characters or less.

Manual setting for each channel (continued)

Skipping channels

Channels with “Skip” set to “On” are passed over when using **P**∧/**P**∨ even if selected while watching the image from the TV.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Skip”, and then press **OK**.
- Skip menu displays.

3 Press ▲/▼ to set “Skip” to “On”, and then press **OK**.

Setting the decoder

When connecting a decoder to the unit, you need to assign the terminal input.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Decoder”, and then press **OK**.
- Terminal inputs information displays. (Off, INPUT1, INPUT2, INPUT3)

3 Press ▲/▼ to set “Decoder” to “INPUT1”, “INPUT 2”, or “INPUT3” and then press **OK**.

NOTE

- “Off” is factory preset value.
- “INPUT1” is the recommended selection.

Setting the child lock

You can block the viewing of any channel.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.
- The selected channel information displays.

2 Press ▲/▼ to select “Lock”, and then press **OK**.
- Child lock menu displays.

3 Press ▲/▼ to set “Lock” to “On”, and then press **OK**.

NOTE

- See page 46 for setting PIN.
- When “Lock” is set to “On” for a channel, “Child lock has been activated.” displays , and the image and sound of the channel are blocked.
- When pressing **OK** while “Child lock has been activated.” displays, PIN input menu will display. Inputting the correct PIN lifts the child lock temporarily until the power is turned off.

Setting the booster

Picture quality may improve in regions with weak signal strength using this function.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **OK**.

2 Press ▲/▼ to select “Booster”, and then press **OK**.
- Booster menu displays.

3 Press ▲/▼ to set “Booster” to “On”, and then press **OK**.

NOTE

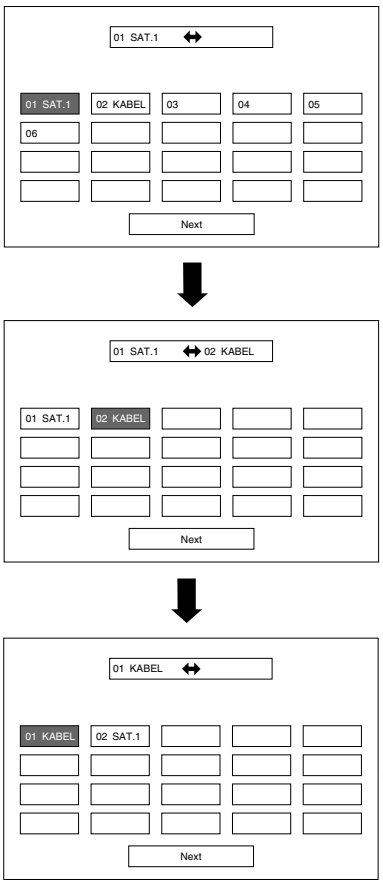
- If signal strength is strong enough for the selected channel, the effect is negligible and may produce instability. In such case, select “Off”.

Sort

Channel positions can be sorted freely.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select “Setup”.
3. Press ▲/▼ to select “Programme Setup”, and then press **OK**.
   If you already set the PIN, enter it here.
   • See page 46 for setting PIN.
4. Press ▲/▼ to select “Sort”, and then press **OK**.
5. Press ◀/▶ to select “Yes”, and then press **OK**.
6. Press ▲/▼/◀/▶ to select the channel you want to move, and then press **OK**.
7. Move it to the desired position by pressing ▲/▼/◀/▶, and then press **OK**.
8. Repeat the steps 6 and 7 until all desired channels are sorted.

Sort menus

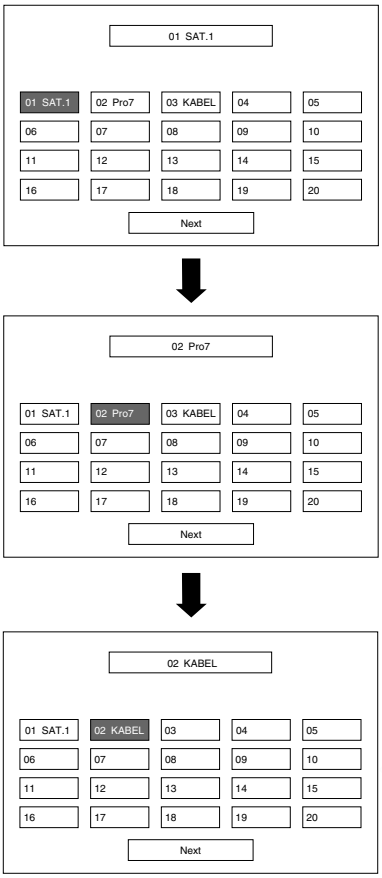


Erase Programme

The individual programme can be erased.

1. Repeat steps 1 to 3 in **Sort**.
2. Press ▲/▼ to select “Erase Programme”, and then press **OK**.
3. Press ◀/▶ to select “Yes”, and then press **OK**.
4. Press ▲/▼/◀/▶ to select the channel you want to erase, and then press **OK**.
   • A message screen pops up.
5. Press ◀/▶ to select “Yes”, and then press **OK** to erase the selected programme. All the subsequent programmes move up.
6. Repeat the step 5 until all desired channels are erased.

Erase programme menus



Language setting for on-screen display

You can also select a language from setup menu. Select from among 13 languages.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Language”, and then press **OK**.

4 Press ▲/▼/◀/▶ to select the desired language listed on the screen, and then press **OK**.

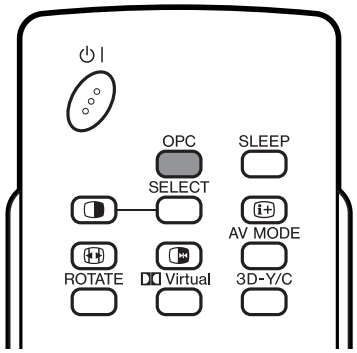
Language list

Dutch	Polish
English	Portuguese
Finnish	Russian
French	Spanish
German	Swedish
Greek	Turkish
Italian	

OPC setting

Automatically adjusts the brightness of the screen.

Using OPC on the remote control unit



Press **OPC** to switch the Optical Picture Control on and off.

Using OPC on the menu screen

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Picture”.

3 Press ▲/▼ to select “OPC”.

4 Press ◀/▶ to select “On”.

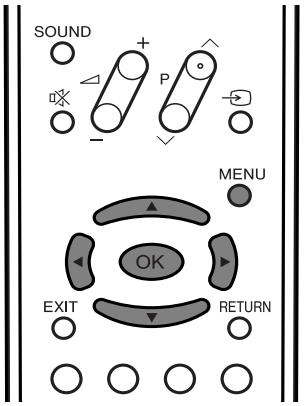
NOTE

- When set to “On”, the System senses the surrounding light and automatically adjusts the backlight brightness. Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.

Selected item	Description
Off	The brightness is fixed at the value set in “Backlight” (see page 26).
On	Automatically adjusts

Picture adjustments

Adjust the picture to your preference with the following picture settings.



1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Picture”.

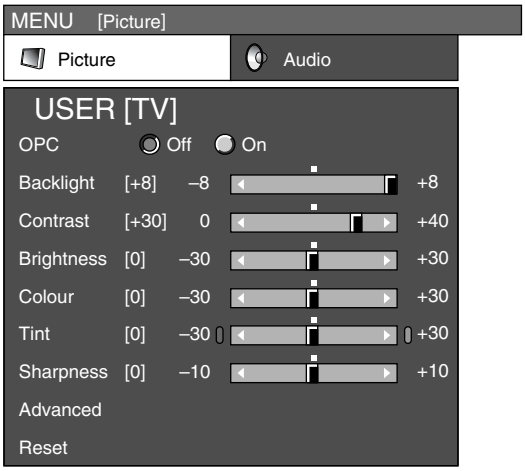
3 Press ▲/▼ to select a specific adjustment item.

4 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select “Reset”, and then press **OK**.

Adjustment items for AV source

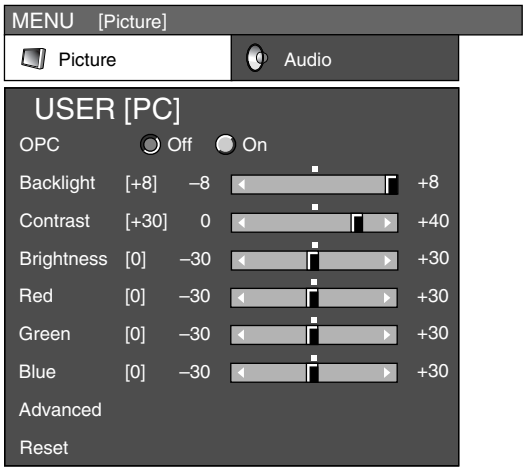


Selected item	◀button	▶button
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Colour	For less colour intensity	For more colour intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness

NOTE

- Select “Advanced” and then press **OK** to set “C.M.S-Hue”, “C.M.S-Saturation”, “C.M.S-Value”, “Colour Temp”, “Black”, “3D-Y/C”, “Monochrome”, “Film Mode” or “I/P Setting”. See pages 27 and 28.

Adjustment items for PC source



Selected item	◀button	▶button
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Red	For weaker red	For stronger red
Green	For weaker green	For stronger green
Blue	For weaker blue	For stronger blue

NOTE

- Select “Advanced” and then press **OK** to set “C.M.S-Hue”, “C.M.S-Saturation” and “C.M.S-Value”.

C.M.S. (Colour Management System)

Colour tone is managed using the six-colour adjustment setting.

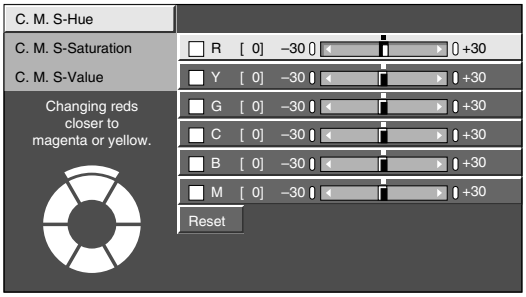
1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Picture”.

3 Press ▲/▼ to select “Advanced”, and then press **OK**.

4 Press ▲/▼ to select “C.M.S.-Hue”, and then press **OK**.

5 Press ▲/▼ to select a specific adjustment item.


C. M. S-Hue
C. M. S-Saturation
C. M. S-Value
Changing reds closer to magenta or yellow.
R [0] –30 +30
Y [0] –30 +30
G [0] –30 +30
C [0] –30 +30
B [0] –30 +30
M [0] –30 +30
Reset

- You can select “C.M.S-Saturation” or “C.M.S-Value” here instead of selecting “C.M.S-Hue”.

6 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select “Reset”, and then press **OK**.

Selected item	Description
C.M.S-Hue	This is a standard to adjust the colour either more reddish or more bluish in tone.
C.M.S-Saturation	Increases or decreases the saturation of a selected colour
C.M.S-Value	A higher value makes the image brighter. A lower value makes the image darker.

Colour temperature

Adjusts the colour temperature to give the best white image.

1 Repeat steps 1 to 3 in **C.M.S. (Colour Management System)**.

2 Press ▲/▼ to select “Colour Temp.”, and then press **OK**.

3 Press ▲/▼ to select the desired level, and then press **OK**.

Selected item	Description
High **Mid-High** **Mid** **Mid-Low** **Low**	White with bluish tone ⬍ White with reddish tone

Black

For easier viewing, change the viewing depth by selecting a level for automatically adjusting the dark portion of an image.

1 Repeat steps 1 to 3 in **C.M.S. (Colour Management System)**.

2 Press ▲/▼ to select “Black”, and then press **OK**.

3 Press ▲/▼ to select “On”, and then press **OK**.

Selected item	Description
Off	No adjustment
On	For high detail in black portions

3D-Y/C

Provides high quality images with minimal dot crawl and cross colour noise.

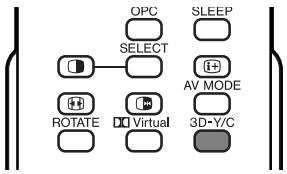
1. Press **MENU** and the MENU screen displays.
2. Press ◄/► to select “Picture”.
3. Press ▲/▼ to select “Advanced”, and then press **OK**.
4. Press ▲/▼ to select “3D-Y/C”, and then press **OK**.
5. Press ▲/▼ to select the desired level, and then press **OK**.

Selected item	Description
Standard	Normal adjustment
Fast	For movie image
Slow	For still image

NOTE

- “3D-Y/C” is not selectable depending on the input signal type.

Activating 3D-Y/C on the remote control unit



Press **3D-Y/C** to switch the 3D-Y/C function on and off.

NOTE

- “3D-Y/C” is set to “On” when the TV is turned back on.
- 3D-Y/C may not operate depending on the input signal type or noisy input signal.
- 3D-Y/C is automatically set to “On” when you change channels or input sources.

Monochrome

For viewing a video in monochrome.

1. Repeat steps 1 to 3 in **3D-Y/C**.
2. Press ▲/▼ to select “Monochrome”, and then press **OK**.
3. Press ◄/► to select “On”, and then press **OK**.

Film mode

Automatically detects a film-based source (originally encoded at 24/25 frames/second, depending on the vertical frequency), analyses it then recreates each still film frame for high-definition picture quality.

1. Repeat steps 1 to 3 in **3D-Y/C**.
2. Press ▲/▼ to select “Film Mode”, and then press **OK**.
   - Some items may be greyed out. They are not selectable.
3. Press ◄/► to select “On”, and then press **OK**.

I/P setting

Adjusting the image and input signal can give you a more beautiful picture.

1. Repeat steps 1 to 3 in **3D-Y/C**.
2. Press ▲/▼ to select “I/P Setting”, and then press **OK**.
   - Some items may be greyed out. They are not selectable.
3. Press ◄/► to select “Interlace” or “Progressive”, and then press **OK**.

NOTE

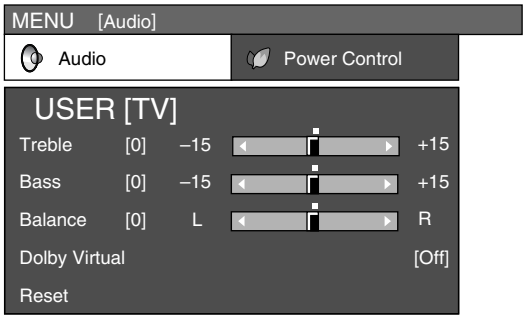
- The I/P Setting is set to Progressive when Film Mode is “On”.

Audio adjustment

You can adjust the sound quality to your preference with the following settings.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Audio”.



3 Press ▲/▼ to select a specific adjustment item.

4 Press ◀/▶ to adjust the item to your desired position.

Selected item	◀button	▶button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Decrease audio from the right speaker	Decrease audio from the left speaker

NOTE

- For resetting all adjustment items to factory preset values, press ▲/▼ to select “Reset”, press **OK**, press ◀/▶ to select “Yes”, and then press **OK**.
- Audio menu items are greyed out when Audio output is variable or when headphones are in use.
- Balance is greyed out when Dolby Virtual is set to “On”.

Dolby Virtual

You can also produce Dolby Virtual effects from the “Audio” setting.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Audio”.

3 Press ▲/▼ to select “Dolby Virtual”, and then press **OK**.

4 Press ◀/▶ to select “On”, and then press **OK**.

NOTE

- You can choose Dolby Virtual by pressing **Virtual** on the remote control unit. See page 17 for Dolby Virtual.
- Audio menu items are greyed out when Audio output is variable or when headphones are in use.
- External Audio Bypass is greyed out when Dolby Virtual is set to “On”.
- Balance is greyed out when Dolby Virtual is set to “On”.
- For some discs, setup may be required on your DVD. In this case, please refer to the operation manual of your DVD player.
- You may not get the Dolby Virtual Surround effect if you adjust “Treble” or “Bass” setting.

Power control

Power control setting allows you to save energy.

Power control for AV source

No signal off

When set to “Enable”, the power will automatically shut down if no signal inputs for 15 minutes.

1. Press **MENU** and the MENU screen displays.
2. Press ◄/► to select “Power Control”.
3. Press ▲/▼ to select “No Signal Off”, and then press **OK**.
4. Press ◄/► to select “Enable”, and then press **OK**.
   - Five minutes before the power shuts down, remaining time displays every minute.

NOTE

- “Disable” is factory preset value.
- When a TV programme finishes, this function may not operate.

No operation off

When set to “Enable”, the power will automatically shut down if there is no operation for 3 hours.

1. Press **MENU** and the MENU screen displays.
2. Press ◄/► to select “Power Control”.
3. Press ▲/▼ to select “No Operation Off”, and then press **OK**.
4. Press ◄/► to select “Enable”, and then press **OK**.
   - Five minutes before the power shuts down, remaining time displays every minute.

NOTE

- “Disable” is factory preset value.

Power control for PC source

Power control setting allows you to save energy.

Power management

When set, the power will automatically shut down.

1. Press **MENU** and the MENU screen displays.
2. Press ◄/► to select “Power Control”.
3. Press ▲/▼ to select “Power Management”, and then press **OK**.
4. Press ▲/▼ to select “Mode1” or “Mode2”, and then press **OK**.

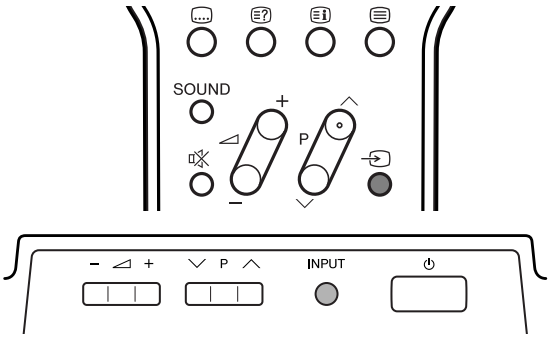
Selected item	Description
Off	• No power management • Factory preset value.
Mode1	• If no signal inputs for 8 minutes, the power shuts down. • Even if you start using the PC and the signal inputs again, the TV stays off. • The TV turns on again by pressing ⏻ on the Display or ⏻	on the remote control unit. (See page 14.)
Mode2	• If no signal inputs for 8 seconds, the power shuts down. • When you start using the PC and the signal inputs again, the TV turns on. • The TV turns on again by pressing ⏻ on the Display or ⏻	on the remote control unit. (See page 14.)

Using external equipment

You can connect many types of external equipment to your TV, like a decoder, VCR, DVD player, PC, game console and camcorder. To view external source images, select the input source from ⏎ on the remote control unit or **INPUT** on the Display.

Displaying an external equipment image

Explanation here is for the setting when connecting DVD to INPUT3 terminal.



CAUTION

- To protect all equipment, always turn off the TV before connecting to a decoder, VCR, DVD player, PC, game console, camcorder or other external equipment.

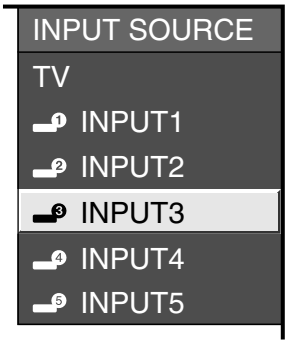
NOTE

- See pages 32 to 35 for external equipment connection.
- Please refer to the relevant operation manual (DVD player, PC, etc.) carefully before making connections.
- Each time ⏎ is pressed, the input source toggles.
- If the image does not come in clearly, you may need to change the input signal type setting on the “Input Select” menu.
- Refer to your external equipment operation manual for the signal type.

Displaying a DVD image (Example)

1

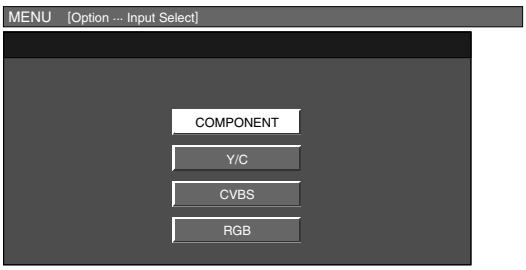
To watch a DVD image, select “INPUT3” from “INPUT SOURCE” menu using ⏎ on the remote control unit or **INPUT** on the Display.



2

Select the desired signal type on “Input Select” in the “Option” menu. (See page 38.)

For INPUT3 signal



The setting is stored and can be selected on the “INPUT SOURCE” menu.

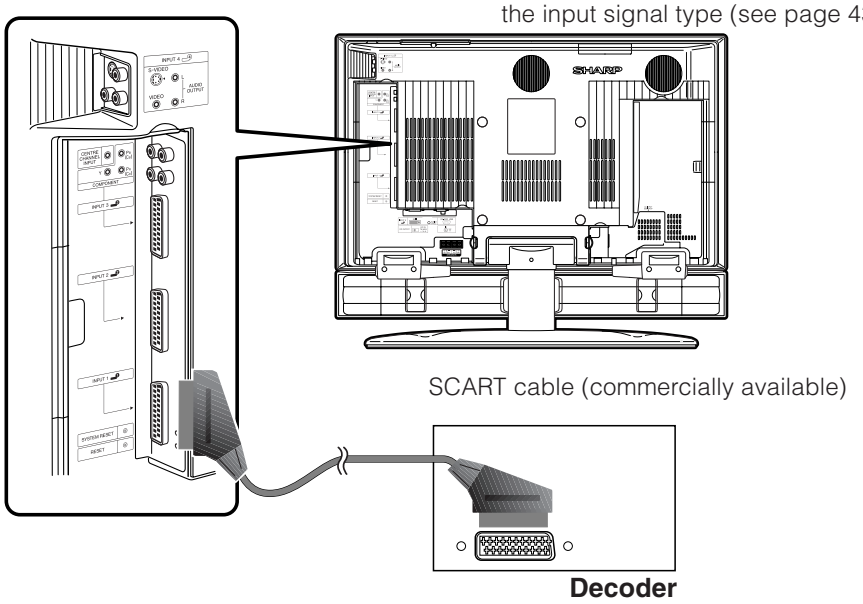
Connecting a decoder

You can use the INPUT 1 terminal when connecting a decoder and other audiovisual equipment.

NOTE

- In cases when the decoder needs to receive signal from the TV, make sure to set “Decoder” to “INPUT1” in the Programme Setup “Manual Adjust” menu. (See page 23.)

To watch an image from this input terminal, you may select the input source (see page 38) and the input signal type (see page 43).



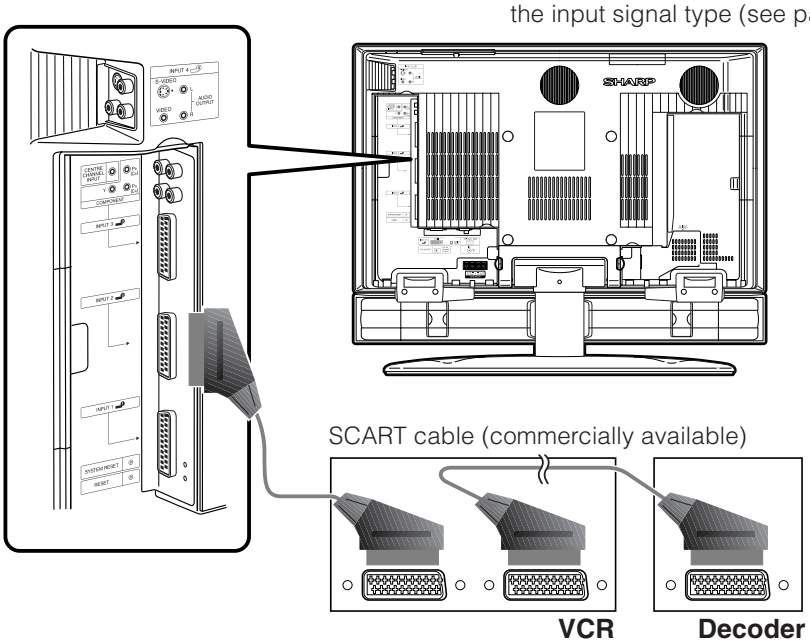
Connecting a VCR

You can use the INPUT 2 terminal when connecting a VCR and other audiovisual equipment.
If your VCR supports TV-VCR advanced “AV Link” systems (see page 33), you can connect the VCR to the INPUT 2 terminal of the TV using the fully-wired SCART cable.

NOTE

- TV-VCR advanced “AV Link” systems may not be compatible with some external sources.
- It is recommended to connect to the INPUT 2 terminal when using a decoder for ground wave signal input with a VCR. If INPUT 2 signals preset in auto installation or programme setup, make sure to set “Decoder” to “INPUT2” in the Programme Setup “Manual Adjust” menu. (See page 23.)

To watch an image from this input terminal, you may select the input source (see page 38) and the input signal type (see page 43).



Using AV Link function

This TV incorporates four typical AV Link functions for smooth connections between the TV and other audiovisual equipment.

NOTE

- Only works when the audiovisual equipment is connected to the INPUT 2 terminal on the TV with AV Link via a fully wired SCART.

One Touch Play

While the TV is in standby mode, it automatically turns on and plays back the image from the audiovisual source (e.g. VCR, DVD).

TV Standby

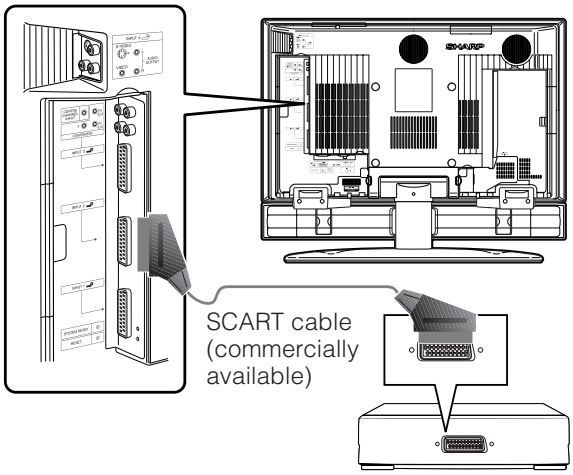
When the connected audiovisual equipment (e.g. VCR, DVD) enters standby mode, so does the TV.

WYSIWYR (What You See Is What You Record)

When the remote control unit of the connected VCR has the WYSIWYR button, you can automatically start recording by pressing the WYSIWYR button.

Preset Download

Automatically transfers the channel preset information from the tuner on the TV to the one on the connected audiovisual equipment (e.g. VCR) via the INPUT 2 terminal.



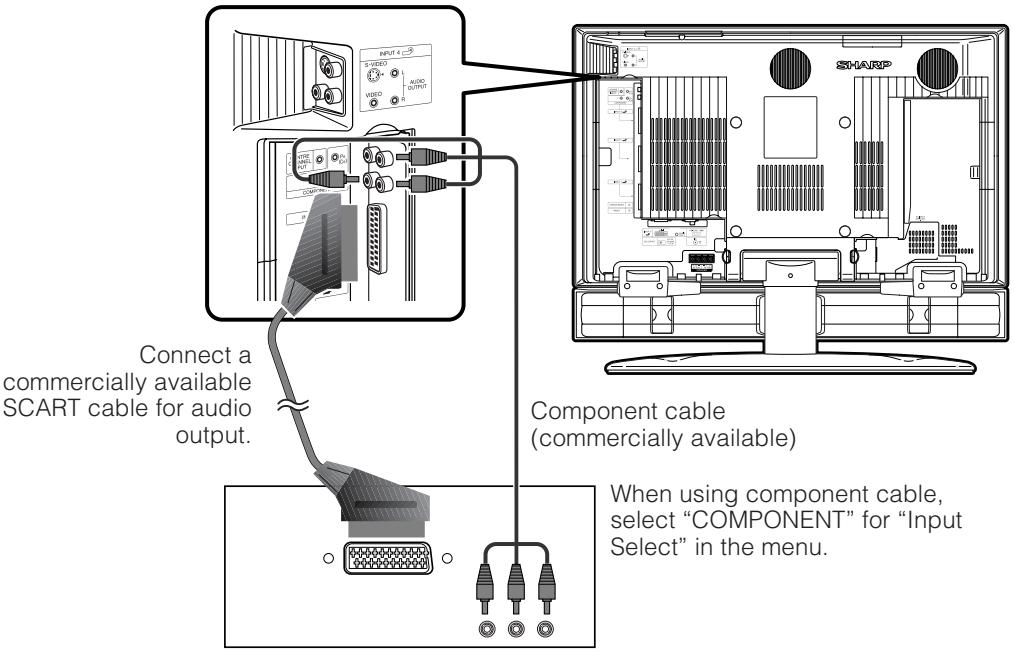
NOTE

- Refer to operation manuals of each external equipment for the details.

Connecting a DVD player

You can use the INPUT 3 terminal when connecting to a DVD player and other audiovisual equipment.

To watch an image from this input terminal, you may select the input source (see page 38) and the input signal type (see page 43).


Connect a commercially available SCART cable for audio output.
Component cable (commercially available)
When using component cable, select “COMPONENT” for “Input Select” in the menu.
DVD player

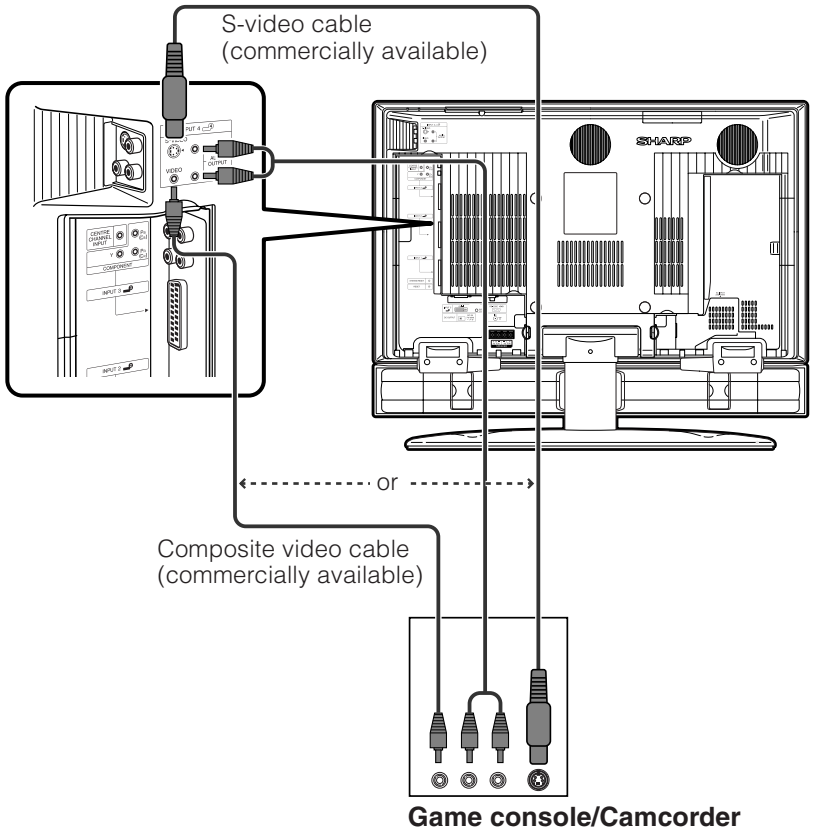
Connecting a game console or camcorder

A game console, camcorder and some other audiovisual equipment are conveniently connected using the INPUT 4 terminals.

To watch an image from this input terminal, you may select the input source (see page 38) and the input signal type (see page 43).

NOTE

- The S-video terminal has priority over the video terminals.
- You can also connect the game console to INPUT 1 or 3 terminals to enjoy clearer picture.
- When using INPUT 4 terminals, select “INPUT 4”, then “AV Input” in the “Option” menu (see page 45).

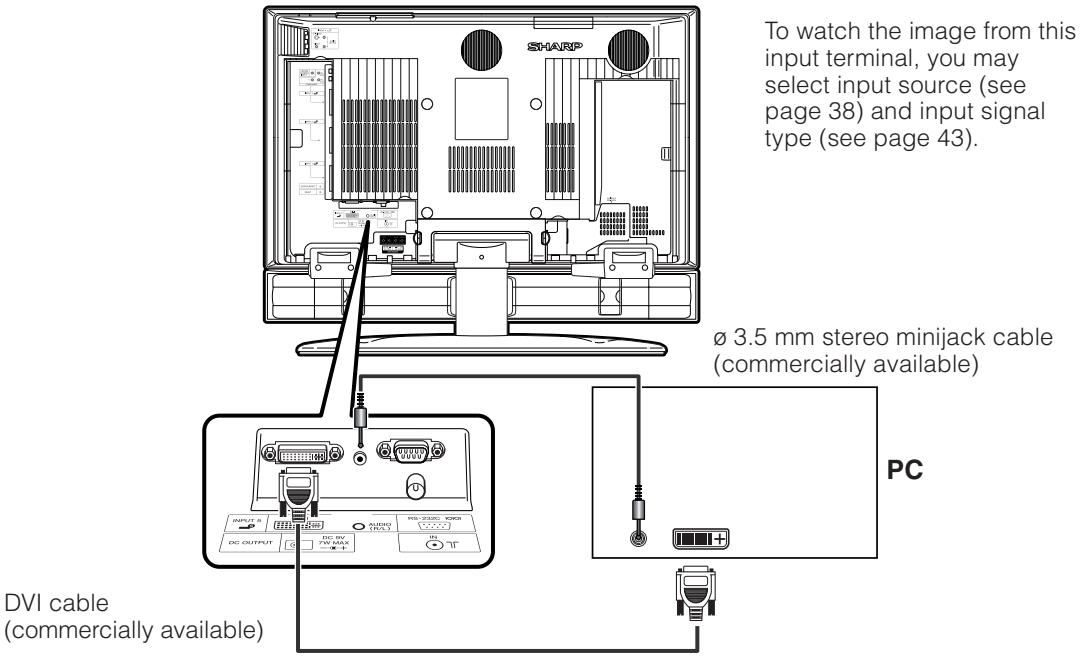


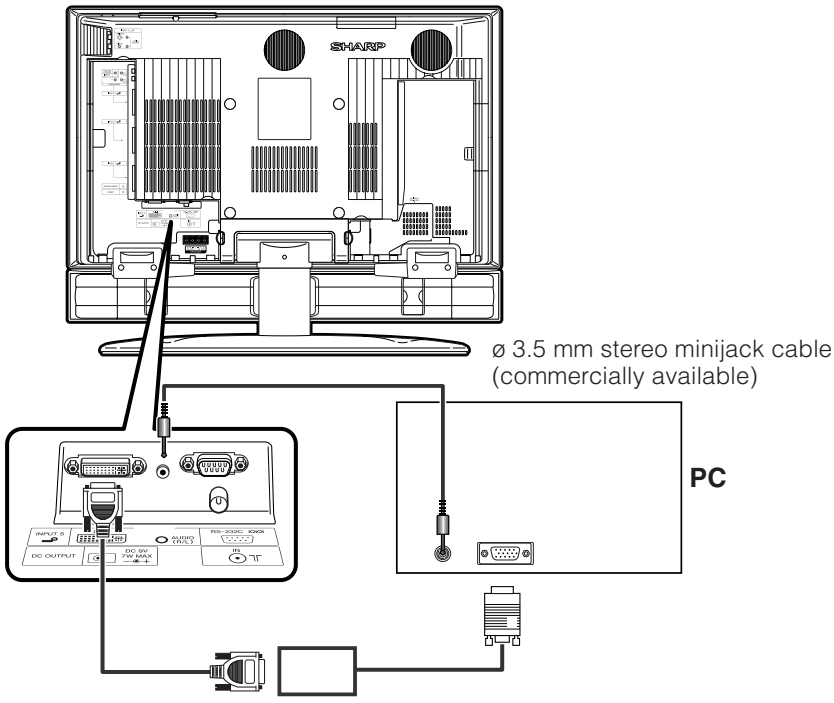
Connecting a PC

Use the INPUT5 terminals to connect a PC.

NOTE

- The PC input terminals are DDC1/2B-compatible.
- Refer to page 52 for a list of PC signals compatible with the TV.


To watch the image from this input terminal, you may select input source (see page 38) and input signal type (see page 43).
ø 3.5 mm stereo minijack cable (commercially available)
PC
DVI cable (commercially available)

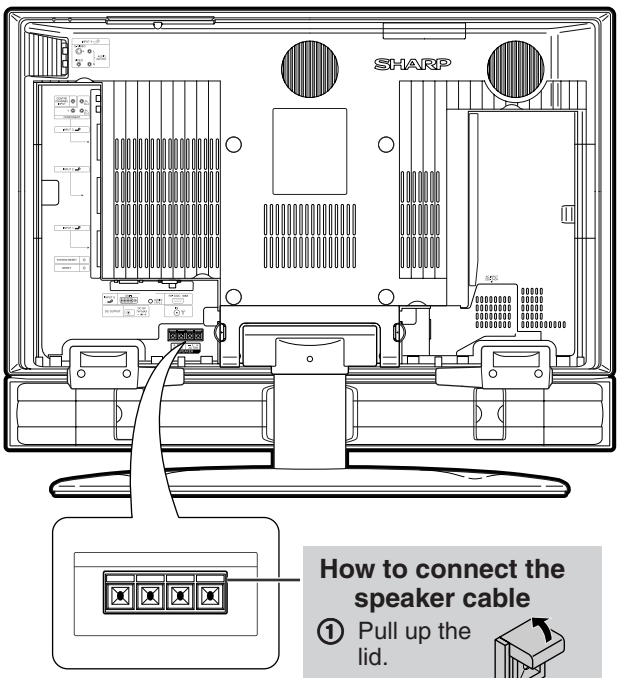


NOTE

- Macintosh adaptor may be required for use for some Macintosh computers.
- When connecting to a PC, the correct input signal type is automatically detected. (See page 43.) If the PC image does not come in clearly, you may need to set the Auto Sync. adjustment in the “Setup” menu. (See page 37.)

Connecting external speakers

Rear view



Make sure to disconnect the connected speaker cables in advance when connecting external speakers.

Make sure to connect the speaker terminal and cable polarity (+, −) properly.
- The speaker terminals have plus (+) and minus (−) polarity.
- Plus is red and minus is black.
- The cables are also divided into plus and minus.
- When connecting the left/right speakers, be sure to connect the plus/minus terminals with the correct cables.

NOTE
- Unplug the AC cord from the AC outlet before installing the speakers.

CAUTION
- Make sure external speakers have 4 ohm and 10 watt specifications.
- Connect the plus/minus terminals with the correct cables. Incorrect connection may cause a short.

External Audio Bypass

External Audio Bypass automatically optimises the audio quality to suit internal (supplied) speaker.

1. Press **MENU** and the MENU screen displays.
2. Press ◀/▶ to select “Setup”.
3. Press ▲/▼ to select “Speaker Setup”, and then press **OK**.
4. Press ▲/▼ to select “External Audio Bypass”, and then press **OK**.
5. Press ◀/▶ to select “Yes” or “No”, and then press **OK**.

Selected item	Description
No	Sets the optimum audio for the internal (supplied) speaker.
Yes	When you are using your own speakers, output the original sound.

NOTE
- External Audio Bypass is greyed out when Dolby Virtual is set to “On”.
- When Dolby Virtual is on, External Audio Bypass automatically sets to “Yes”.

Useful adjustment settings

Image position (for TV/AV input mode)

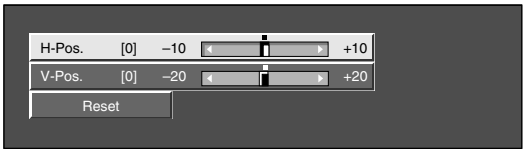
For adjusting a picture's horizontal and vertical position.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select "Setup".

3 Press ▲/▼ to select "Position", and then press **OK**.

4 Press ▲/▼ to select "H-Pos." or "V-Pos.".



5 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select "Reset", and then press **OK**.
- **Adjustments are stored separately according to input source.**
- This function is available for AV input mode and TV tuner mode.

Selected item	Description
H-Pos.	Centres the image by moving it to the left or right.
V-Pos.	Centres the image by moving it up or down.

Audio Only

When listening to music from a music programme, you can set the Display off and enjoy audio only.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select "Option".

3 Press ▲/▼ to select "Audio Only", and then press **OK**.

4 Press ◀/▶ to select "On", and then press **OK**.

Selected item	Description
On	Audio is output without screen image.
Off	Both screen images and audio are output.

Auto Sync. adjustment (PC input mode only)

For automatically adjusting the PC image.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select "Setup".

3 Press ▲/▼ to select "Auto Sync.", and then press **OK**.

4 Press ◀/▶ to select "Yes", and then press **OK**.

- Auto Sync. starts and "Adjusting the image" displays.

NOTE

- When Auto Sync. is successful, "Auto Sync completed successfully" displays. If not, Auto Sync. failed.
- Auto Sync. may fail even if "Auto Sync completed successfully" displays.
- Auto Sync. is likely to succeed when an input PC image has wide vertical stripes (ex. pattern with high contrast stripes, or cross-hatched).
  It may fail when an input PC image is solid (low contrast).
- Be sure to connect the PC to the TV and switch it on before starting Auto Sync.

Fine Sync. adjustment (PC input mode only)

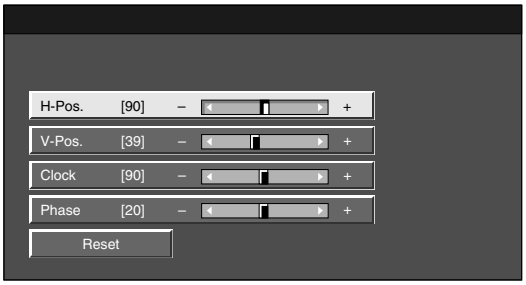
Ordinarily you can easily adjust the picture as necessary to change image position using Auto Sync. In some cases, however, manual adjustment is needed to optimise the image.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Fine Sync.”, and then press **OK**.

4 Press ▲/▼ to select the specific adjustment item.



5 Press ◀/▶ to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press ▲/▼ to select “Reset”, and then press **OK**.

Selected item	Description
H-Pos.	Centres the image by moving it to the left or right.
V-Pos.	Centres the image by moving it to the up or down.
Clock	Adjusts when the image flickers with vertical stripes.
Phase	Adjusts when characters have low contrast or when the image flickers.

Input Select

Selecting input source

Can use for selecting the input source.

1 Press ⏎ on the remote control unit or **INPUT** on the Display.

2 Press ⏎ on the remote control unit or **INPUT** on the Display to select the input source.

- An image from the selected source automatically displays.
- You can also select the input source by pressing ▲/▼.

Selecting input signal type

For setting the signal type of external equipment.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”.

3 Press ▲/▼ to select “Input Select”, and then press **OK**.

4 Press ▲/▼/◀/▶ to select a signal type you want to set, and then press **OK**.

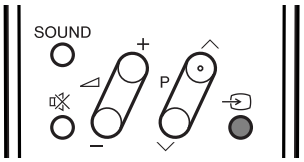
Input type	Signal type
INPUT 1	CVBS, RGB
INPUT 2	Y/C, CVBS
INPUT 3	COMPONENT, Y/C, CVBS, RGB
INPUT 4	AUTO, S-Video, Video
INPUT 5	PC digital, PC analogue, AV digital, AV analogue

NOTE

- **If no (colour) image displays, try to change the other signal type.**
- Check the operation manual of the external equipment for the signal type.

Input Label

You can assign each input source a label you like.



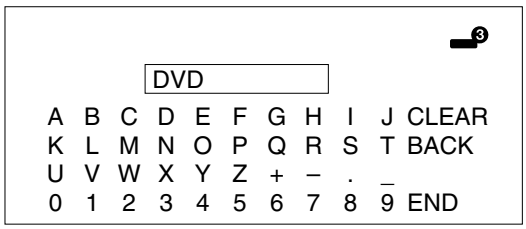
1 Press ⏎ to select the desired input source.

2 Press **MENU** and the MENU screen displays.

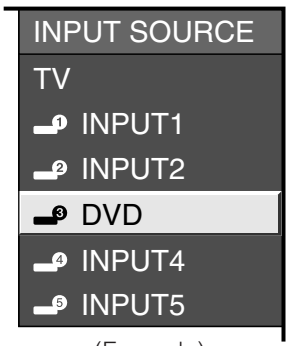
3 Press ◀/▶ to select “Setup”.

4 Press ▲/▼ to select “Input Label”, and then press **OK**.

5 Press ▲/▼/◀/▶ to select each character of the new name for the channel, and then press **OK**.



6 Repeat the above until the name is fully spelt out, and then press **OK**.
- The name can be 6 characters or less.



(Example)

NOTE

- You cannot change labels if the input source is TV.

Colour system setting (for TV/AV input mode)

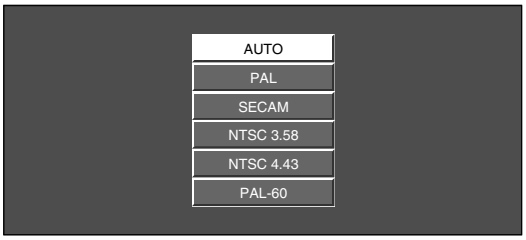
You can change the colour system to one that is compatible with the image on the screen.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”.

3 Press ▲/▼ to select “Colour System”, and then press **OK**.

4 Press ▲/▼ to select a compatible video signal system of your equipment, and then press **OK**.
- “NTSC 3.58” cannot be selected in TV tuner mode.

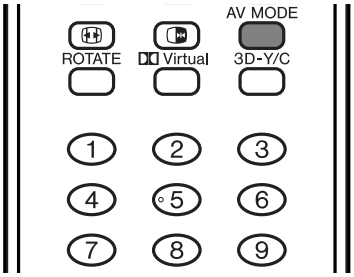


NOTE

- Factory preset value is “AUTO”.
- If “AUTO” is selected, colour system for each channel is automatically set. If an image does not display clearly, select another colour system (e.g. PAL, NTSC 4.43).
- This function is available for AV input mode and TV tuner mode.

AV mode selection

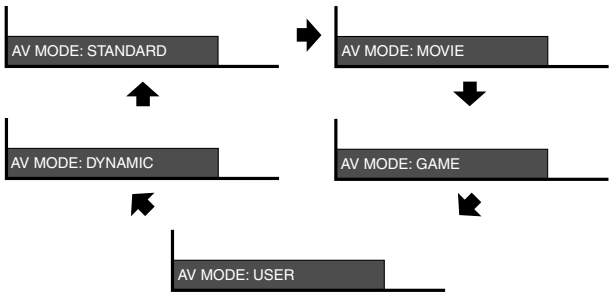
AV mode gives you five viewing options to choose from to best match the system environment, which can vary due to factors like room-brightness, type of programme watched or the type of image input from external equipment.



1 Press **AV MODE**.
- Present AV mode displays.

2 Press **AV MODE** again before the mode displayed on the screen disappears.
- The mode changes as shown below.

AV input mode



PC input mode

Selected item	Description
STANDARD	For a highly defined image in a normally bright room
MOVIE	For a movie
GAME	Lowers image brightness for easier viewing.
USER	Allows the user to customise settings as desired. You can set the mode for each input source.
DYNAMIC	For a clear-cut image emphasising high contrast for sports viewing

NOTE

- You can select a different AV MODE item for each input mode. (For example, select STANDARD for TV input and DYNAMIC for VIDEO input.)

Wide screen signalling (WSS) (for TV/AV input mode)

WSS allows a television to switch automatically among the different screen formats.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “WSS”, and then press **OK**.

4 Press ◀/▶ to select “On” or “Off”, and then press **OK**.

NOTE

- Try to set WIDE mode if an image does not switch to the correct screen format. When the broadcast signal contains no WSS information, the function will not work even if enabled.
- This function is available for AV input mode and TV tuner mode.

Picture aspect ratio (for TV/AV input mode)

The WSS signal has 4:3 auto-switching that allows you to select between Normal and Panorama.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “4:3 Mode”, and then press **OK**.

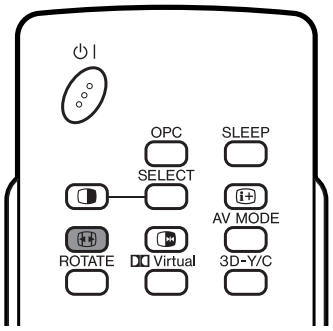
4 Press ◀/▶ to select “Normal” or “Panorama”, and then press **OK**.

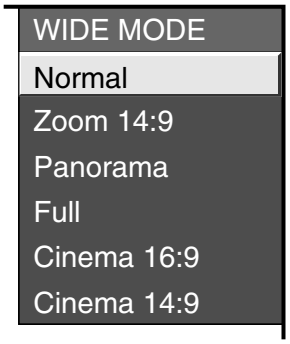
WSS signal 4:3 screen

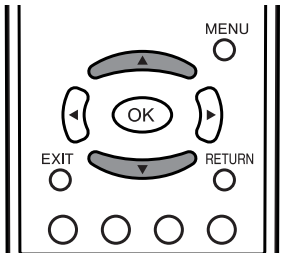
4:3 mode “Normal”

4:3 mode “Panorama”

Selected item	Description
Normal	Normal range keeping 4:3 or 16:9 aspect ratio
Panorama	Wide image without side bars







WIDE mode (for TV/AV input mode)

Manual Selection

1 Press ⇔.

- The WIDE MODE menu displays.
- The menu lists the wide mode options selectable for the type of video signal currently received.

2 Press ⇔ or ▲/▼ while the WIDE MODE menu displays on the screen.

- As you toggle down the options, each is immediately reflected on the Display. No need to press **OK**.

Auto Selection

If you set “WSS” and “4:3 Mode” in the Setup menu on page 40, the optimum WIDE mode is automatically chosen for every broadcast containing the WSS information.

“WSS” menu

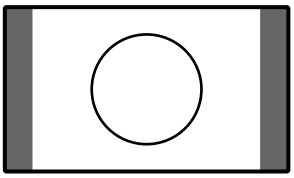
To enable Auto Selection, set “WSS” in the Setup menu to “On”. (See page 40.)

“4:3 Mode” menu

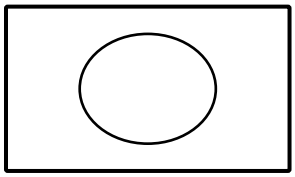
To set the type of the wide screen, select “Normal” or “Panorama” in the 4:3 Mode menu. (See page 40.)

NOTE

- If the broadcast signal contains no WSS information, Auto Selection will not function even when the WSS option is enabled.
- This function is available for AV input mode and TV tuner mode.

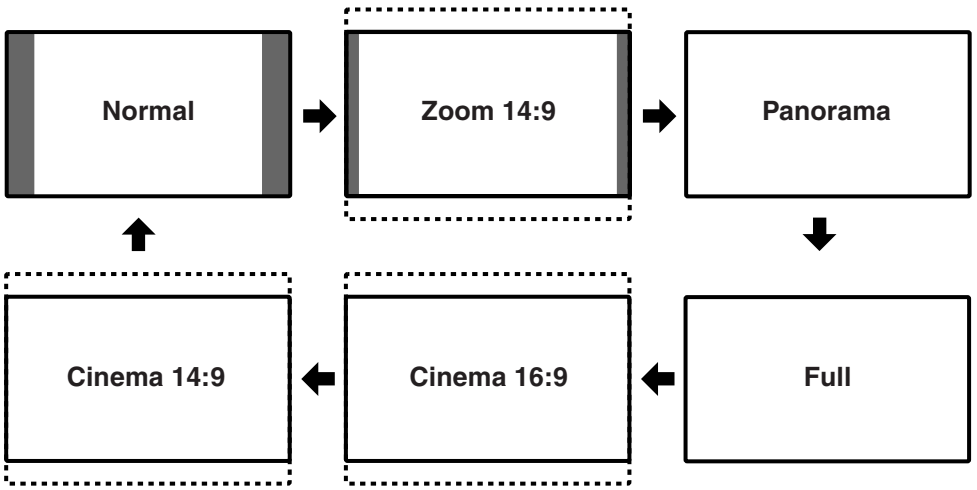


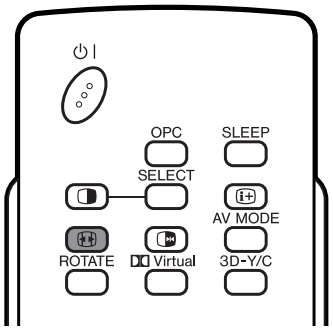
4:3 Mode set to “Normal”



4:3 Mode set to “Panorama”

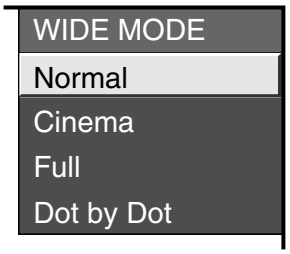
Selected item	Description
Normal	For 4:3 “standard” pictures. A side bar appears on each side.
Zoom 14:9	For 14:9 letterbox pictures. A thin side bar appears on each side, and you may also see bars on the top and bottom with some programmes.
Panorama	In this mode the picture is progressively stretched toward each side of the screen.
Full	For 16:9 squeeze pictures.
Cinema 16:9	For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.
Cinema 14:9	For 14:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.

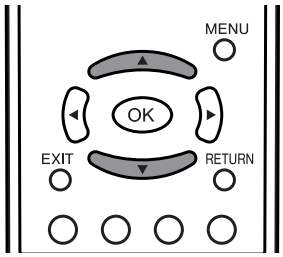




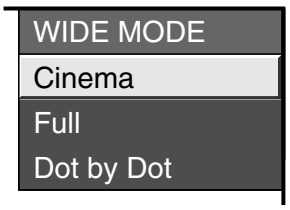
EXAMPLE

Input signal (640×480)





Input signal (1024×768)



WIDE mode (for PC input mode)

You can select the screen size.

NOTE

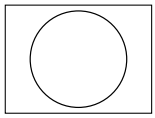
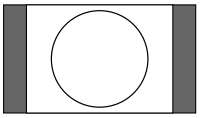
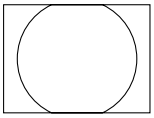
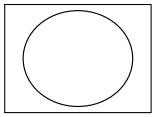
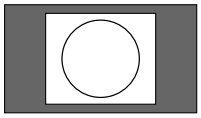
- Connect the PC before making adjustments. (See page 35.)
- Selectable screen size may vary with input signal type.

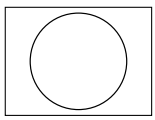
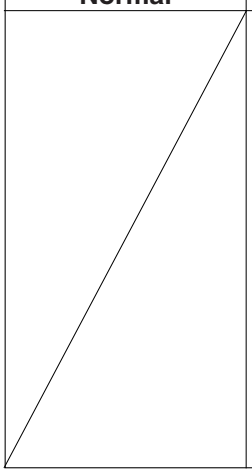
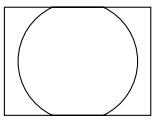
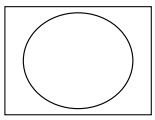
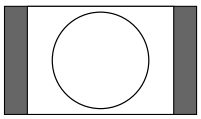
1 Press ⇔.
- The WIDE MODE menu displays.

2 Press ⇔ or ▲/▼ to select a desired item on the menu.

EXAMPLE

Screen size images.

Input Signal		Normal	Cinema	Full	Dot by Dot
 640×480	➡	 Keeps the original aspect ratio in a full screen display.	 Keeps the original aspect ratio in a full screen display. The top and bottom of the image are slightly cropped.	 An image fully fills the screen.	 Detects the resolution of the signal and displays an image with the same number of pixels on the screen.

Input Signal		Normal	Cinema	Full	Dot by Dot
 1024×768	➡		 Keeps the original aspect ratio in a full screen display. The top and bottom of the image are slightly cropped.	 An image fully fills the screen.	 Detects the resolution of the signal and displays an image with the same number of pixels on the screen.

Input signal (PC input mode only)

- Some input signals may have to be registered manually to display properly.
- The pairs of input signals (resolutions) in the list below are not distinguishable when received. In such case, you have to set the correct signal manually. After setting once, it will display when the same signal (resolution) is input again.

640×400	720×400
640×480	848×480
1024×768	1280×768

NOTE

- You can only select the “Input Signal” on the Setup menu when receiving one of the 6 input signals listed above.

1 Press **MENU** and the MENU screen displays.

2 Press ◄/► to select “Setup”.

3 Press ▲/▼ to select “Input Signal” and then press **OK**.

4 Press ▲/▼ to select the desired input signal on the display.

DNR (Digital Noise Reduction)

Produces a clearer video image.

1 Press **MENU** and the MENU screen displays.

2 Press ◄/► to select “Option”.

3 Press ▲/▼ to select “DNR”, and then press **OK**.
- Some items may be greyed out. They are not selectable.

4 Press ▲/▼ to select the desired level (Off, High, Low), and then press **OK**.

Quick Shoot

Improves LCD response when viewing fast-moving images. The effect is greater at low room temperatures (at or below 15˚C/59˚F).

1 Press **MENU** and the MENU screen displays.

2 Press ◄/► to select “Option”.

3 Press ▲/▼ to select “Quick Shoot”, and then press **OK**.

4 Press ◄/► to select “On”, and then press **OK**.

NOTE

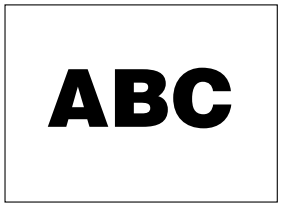
- Quick Shoot may cause image noise. If this occurs, turn the function “Off”.

Rotate

You can set the orientation of the picture.

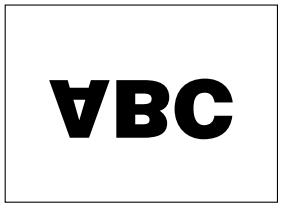
1. Press **MENU** and the MENU screen displays.
2. Press ◄/► to select “Setup”.
3. Press ▲/▼ to select “Rotate”, and then press **OK**.
4. Press ▲/▼ to select the desired mode, and then press **OK**.

[Normal]: normal image.

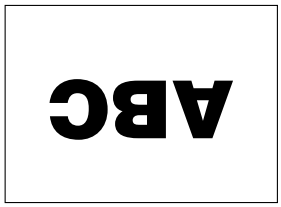


[Mirror]: mirror image.

[Upside Down]: upside down image.



[Rotate]: rotated image.



INPUT 4

You can change the terminal settings depending on the purpose of your usage, such as connecting recording equipment to the INPUT 4/AUDIO OUTPUT terminals to record broadcast programs or connecting a player to play programs.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”.

3 Press ▲/▼ to select “INPUT 4”, and then press **OK**.

4 Press ▲/▼ to select ”AV In”, ”Audio Out (Fixed)” or “Audio Out (Variable)”, and then press **OK**.

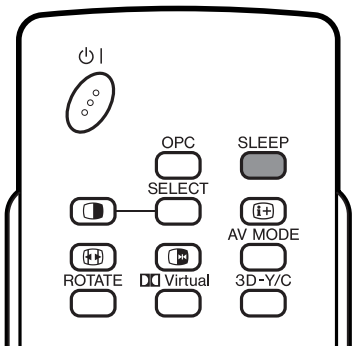
Selected item	Description
AV In	• Functions as the INPUT 4 terminals.
Audio Out (Fixed)	• Sound via speakers is adjusted with −/+ on the remote control unit or the Display. • Sound via the AUDIO OUTPUT terminal is not adjustable and constantly outputs.
Audio Out (Variable)	• Sound via the AUDIO OUTPUT terminal is adjusted with −/+ on the remote control unit or the Display. • Sound via speakers is muted.

NOTE

• ”INPUT 4” is greyed out when “Audio Out (Fixed)” or “Audio Out (Variable)” is selected.

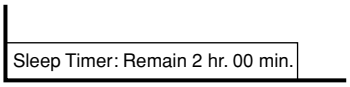
Sleep timer

Allows you to set a time when the TV automatically switches to standby.



1 Press **SLEEP**.

• Remaining time displays when sleep timer has been set.



2 Each time you press **SLEEP**, the remaining time switches as shown below.

• When the time has been set, countdown automatically starts.

• Five minutes before the preset of time expires, the remaining time displays each minute.

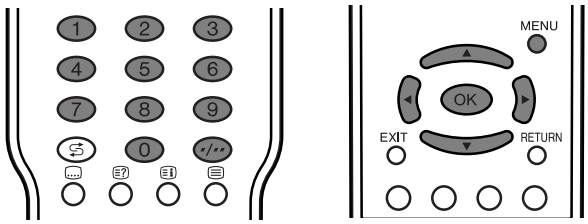
0 hr. 30 min. → 1 hr. 00 min. → 1 hr. 30 min.
↓
2 hr. 00 min. → 2 hr. 30 min. → Off

NOTE

• Select “Off” by pressing **SLEEP** to cancel the sleep timer.

PIN setting for child lock (for TV/AV input mode)

Allows you to use a PIN to protect certain settings from being accidentally changed.



1 Press **MENU** and the MENU screen displays.

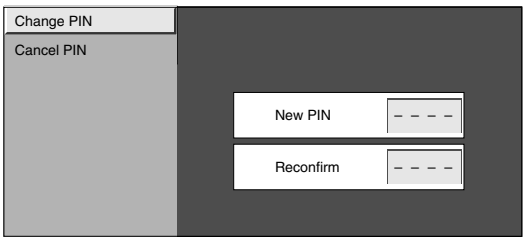
2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Child Lock”, and then press **OK**.

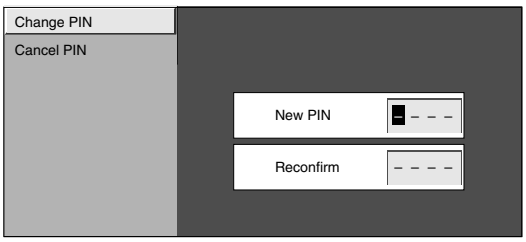
4 If you already set the PIN, enter it here.

– – – –

5 Press ▲/▼ to select “Change PIN”, and then press **OK**.



6 Enter the 4-digit number as a PIN using **0** – **9**.



7 Enter the same 4-digit number as in step 6 to confirm.

- “The system PIN has been changed successfully” displays.

NOTE

- To view a locked channel (Lock setting in Programme Setup “Manual Adjust” is set to “On”), you must enter a PIN. (See page 23.) When you select a locked channel, a PIN prompt message pops up. Press **OK** to display the PIN input window.

Resetting the PIN

Allows you to reset your PIN.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Setup”.

3 Press ▲/▼ to select “Child Lock”, and then press **OK**.

4 Enter the PIN.

– – – –

5 Press ▲/▼ to select “Reset”, and then press **OK**.

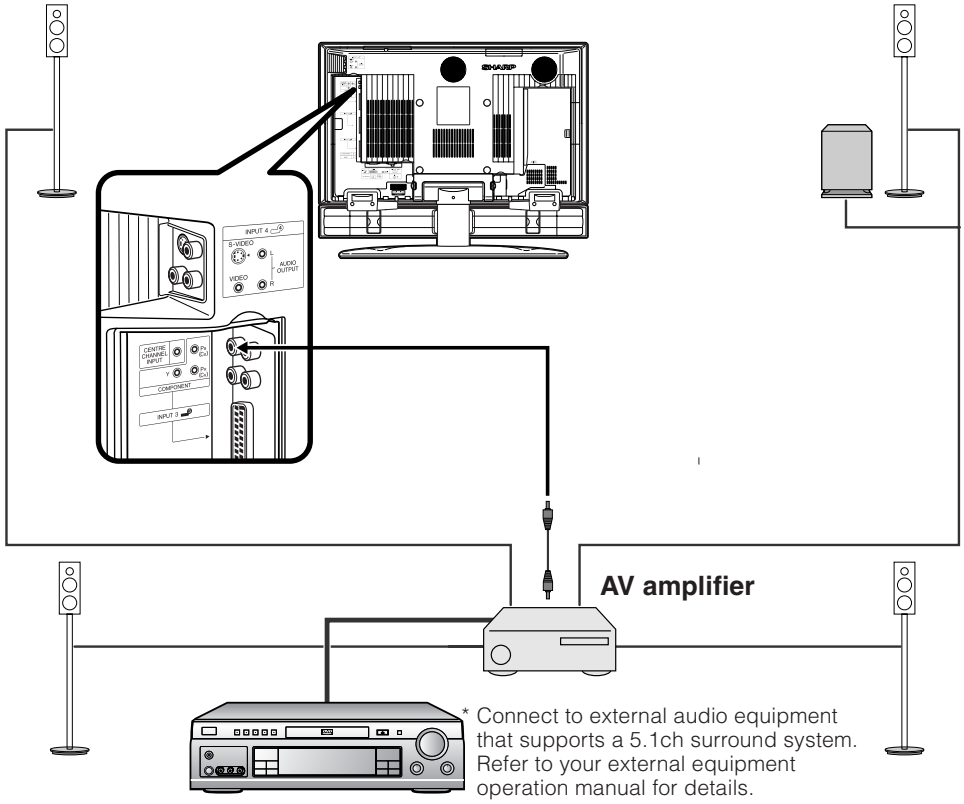
6 Press ◀/▶ to select “Yes”, and then press **OK**.

NOTE

- **As a precautionary measure, make a note of your PIN and keep it in a familiar place. If you lose or forget your PIN, initialise the TV to return all settings except for the TV channel settings to factory preset values. (See page 58.)**
- This function is available for TV tuner mode.

Centre Channel Input

You can use the speaker as the centre speaker when using a 5.1ch surround system.


AV amplifier
* Connect to external audio equipment that supports a 5.1ch surround system. Refer to your external equipment operation manual for details.
DVD player, etc.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”, and then press **OK**.

3 Press ▲/▼ to select “Centre Channel Input”, and then press **OK**.

4 Press ◀/▶ to select “On” , and then press **OK**.

- Only the sound from the Centre Channel Input terminal is output from the speaker.

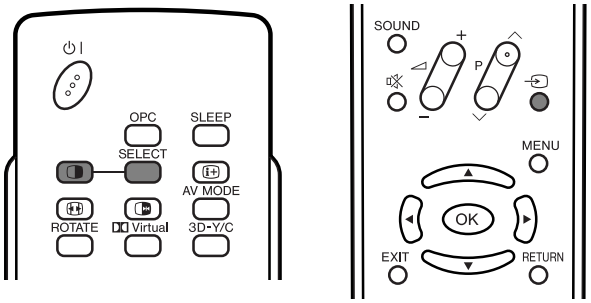
Useful features

Dual screen functions

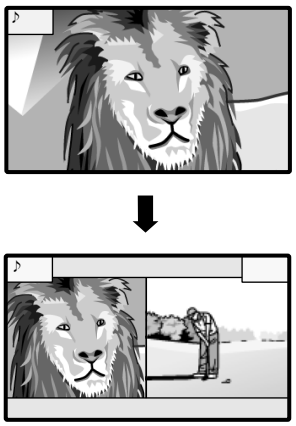
Allows you to display two pictures on the screen at one time.

Dual screen

You can display two pictures except when inputting from the INPUT 5 terminal.



1 Press .
- Dual screen displays and a selected input source image displays.



2 Press **SELECT** to set either screen to be active.
- " ♪ " displays on the active screen, which has sound output.

3 Press to select another input source on the active screen.
- A selected image displays.

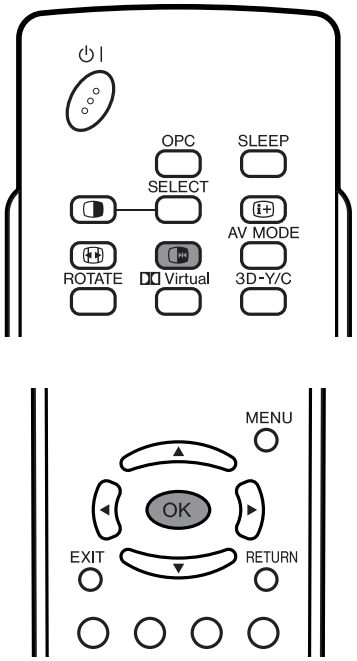
4 Press to exit dual screen.

NOTE

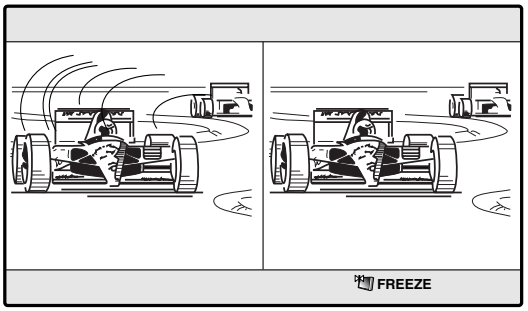
- This function does not work under the following input conditions:
  ①INPUT 5 mode,
  ②Two pictures from the same source (e.g. INPUT 1 and INPUT 1),
  ③Two pictures with different vertical frequency (e.g. PAL and PAL-60),
  ④HDTV signal source (480P/1080i/720P) is input on the right side screen display.
- When this function is not available, "No dual screen display available." will display.

Picture and still image

You can freeze a motion picture on the display.



1 Press .
- A moving image displays on the left screen and a still image displays on the right screen. The still image is one frame captured from a moving image at the moment you press .



2 Update the still image by pressing **OK**.
- Each time you press **OK**, the image on the right screen updates.

3 Press to exit still image.

NOTE

- This function does not work in INPUT 5.
- When this function is not available, "No still image display available." will display.
- The still image automatically goes out after 30 minutes.

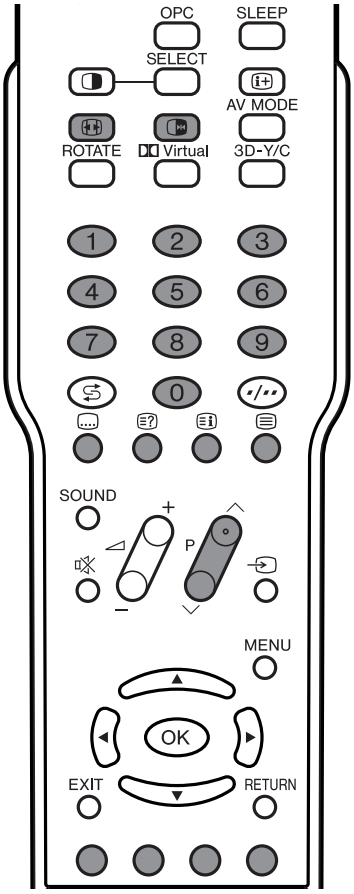
Teletext function

What is Teletext?

Teletext broadcasts pages of information and entertainment to specially equipped television sets. Your TV receives Teletext signals broadcast by a TV network, and decodes them into graphical format for viewing. News, weather and sports information, stock exchange prices and programme previews are among the many services available.

Teletext mode

Teletext is turned on/off with ☰ on the remote control unit. You can operate your TV in Teletext mode directly by inputting commands with the remote control unit.



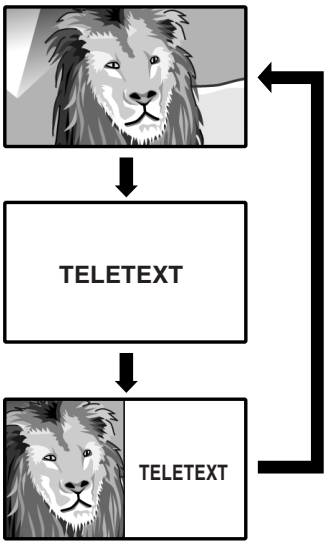
Turning on and off Teletext

1 Select a TV channel or external input source providing the Teletext programme.

2 Press ☰ to display the Teletext.

3 Press ☰ again to display the Teletext on the right screen and normal image on the left screen.

- Each time you press ☰, the screen switches as shown upper right.
- If you select a programme with no Teletext signal, “No Teletext available.” displays.
- The same message displays during dual screen or other modes if no Teletext signal is available.

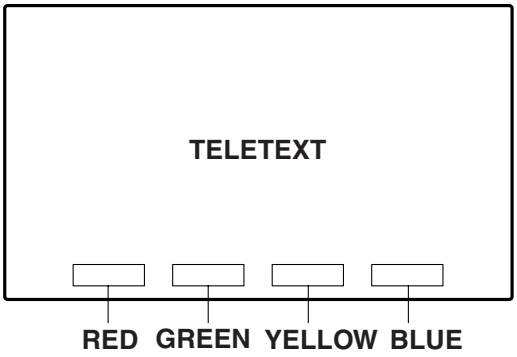


When viewing the Teletext information

- Press **P**∧ to increase the page number.
- Press **P**∨ to decrease the page number.

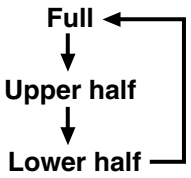
Button functions

Colour (RED/GREEN/YELLOW/BLUE):
You can select a group or block of pages displayed in the coloured brackets at the bottom of the screen by pressing the corresponding **Colour (RED/GREEN/YELLOW/BLUE)** on the remote control unit.



0 – **9**:
Directly select any page from 100 to 899 by using **0** – **9**.

⊞:
Each time you press ⊞, the TELETEXT image switches as shown below.



?:
To reveal hidden information such as an answer to a quiz, press ?.

- Press ? again to hide the information.

⏭:
To stop updating Teletext pages automatically, press ⏭.

- Press ⏭ again to release the hold mode.

Displaying Subtitle

You can display several subtitles as they are transmitted.

1 Press to display the subtitle.
- Subtitle is updated by the information sent by the broadcasting station.
- To stop updating Subtitle automatically, press .

2 Press to exit the subtitle screen.

NOTE
- Subtitle will not be displayed when the service does not contain the subtitle information.

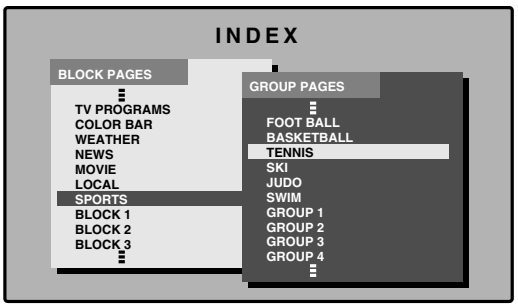
Displaying TOP Overview

When receiving TOP Teletext, you can read a TOP text overview.

1 Press to display Teletext.

2 Press to display the TOP Overview as shown below.

TOP Overview screen



3 Select the desired block or group by using ▲/▼/◀/▶.

4 Press **OK** to display the selected block or group pages.

5 Press to exit the TOP Overview screen.

Time display

You can display the time information included in the Teletext broadcasts.

1 Select a TV channel providing Teletext information.
(The time information is automatically captured.)

2 Press . The channel display will appear on the Display.

3 Press again within the three-second interval the channel display is on the screen. Time information will display on the lower left of the screen for about three seconds.

4 Even when you change the TV channel, you can display the time information with steps 2 – 3 above.

NOTE
- The time display cannot be stored once the power is turned off. When you turn on the power, perform steps 1 – 4 again.
- If acquired successfully, the time information will appear in the upper-right corner of the screen by pressing **MENU**.

Appendix

Troubleshooting

Problem	Possible Solution
• No power.	• Check if you pressed ⏻ | on the remote control unit. (See page 14.) If the indicator on the Display lights up red, press ⏻ |. • Is the AC cord disconnected? (See page 6.) • Has the power been turned on? (See page 14.)
• Unit cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the unit after first turning the power off, or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.
• Remote control unit does not operate.	• Are batteries inserted with polarity (+, −) aligned? (See page 8.) • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light illuminated to remote control sensor?
• Picture is cut off.	• Is the image position correct? (See page 37.) • Are screen mode adjustments such as picture size made correctly? (See pages 40 to 42.)
• Strange colour, light colour, or dark, or colour misalignment.	• Adjust the picture tone. (See pages 26 and 28.) • Is the room too bright? The picture may look dark in a room that is too bright. • Check the colour system setting. (See pages 22 and 39.) • Check the input signal setting. (See page 38.)
• Power is suddenly turned off.	• The unit's internal temperature has increased. Remove any objects blocking vent or clean. • Check the power control setting. (See page 30.) • Is sleep timer set? (See page 45.)
• No picture.	• Is connection to other components correct? (See pages 31 to 35.) • Has input signal setup been done correctly after connection? (See page 38.) • Is the correct input selected? (See page 38.) • Is a non-compatible signal being input? (See page 52.) • Is picture adjustment correct? (See pages 26 to 28.) • Is the antenna connected properly? (See page 9.) • Is "On" selected in "Audio Only"? (See page 37.)
• No sound.	• Is the volume too low? (See page 16.) • Is "Audio Out (Variable)" selected in "INPUT 4"? (See page 45.) • Is the speaker connected properly? • Is "On" selected in "Centre Channel Input"? (See page 47.) • Make sure that headphones are not connected. (See page 11.)

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
  Storage temperature: –20°C to +60°C (–4°F to +140°F).

PC compatibility chart

PC/MAC	Resolution		Horizontal Frequency	Vertical Frequency	VESA Standard
PC	VGA	640 x 400	31.5 kHz	60 Hz	
			37.9 kHz	85 Hz	O
		720 x 400	31.5 kHz	60 Hz	
			37.9 kHz	85 Hz	O
		640 x 480	31.5 kHz	60 Hz	O
			37.9 kHz	72 Hz	O
			37.5 kHz	75 Hz	O
			43.3 kHz	85 Hz	O
	WVGA	848 x 480	31.5 kHz	60 Hz	
	SVGA	800 x 600	35.1 kHz	56 Hz	O
			37.9 kHz	60 Hz	O
			48.1 kHz	72 Hz	O
			46.9 kHz	75 Hz	O
			53.7 kHz	85 Hz	O
	XGA	1024 x 768	48.4 kHz	60 Hz	O
			56.5 kHz	70 Hz	O
			60.0 kHz	75 Hz	O
			68.7 kHz	85 Hz	O
	WXGA	1280 x 720	45.0 kHz	60 Hz	
		1280 x 768	48.1 kHz	60 Hz	
		1366 x 768	48.4 kHz	60 Hz	
	SXGA	1280 x 1024	64.0 kHz	60 Hz	O
MAC13"	VGA	640 x 480	34.9 kHz	67 Hz	
MAC16"	SVGA	832 x 624	49.7 kHz	75 Hz	
MAC19"	XGA	1024 x 768	60.2 kHz	75 Hz	

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DDC is a registered trademark of Video Electronics Standards Association.
Power Management is a registered trademark of Sun Microsystems, Inc.
VGA and XGA are registered trademarks of International Business Machines Co., Inc.

RS-232C port specifications

PC Control of the System

- When a program is set, the display can be controlled from the PC using the RS-232C terminal. The input signal (PC/video) can be selected, the volume can be adjusted and various other adjustments and settings can be made, enabling automatic programmed playing.

- Attach an RS-232C cable cross-type (commercially available) to the supplied Din/D-sub RS-232C for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using PCs.

Communication conditions

Set the RS-232C communications settings on the PC to match the display's communications conditions. The display's communications settings are as follows:

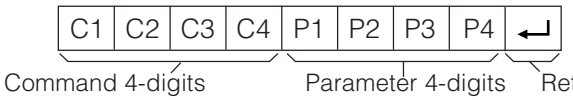
Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure

Send the control commands from the PC via the RS-232C connector.
The Display operates according to the received command and sends a response message to the PC.
Do not send multiple commands at the same time. Wait until the PC receives the OK response before sending the next command.

Command format

Eight ASCII codes + CR



Command 4-digits: Command. The text of four characters.
Parameter 4-digits: Parameter 0 – 9, x, blank, ?

Parameter

Input the parameter values, aligning left, and fill with blank(s) for the remainder. (Be sure that four values are input for the parameter.)
When the input parameter is not within an adjustable range, “ERR” returns. (Refer to “Response code format”.)

0			
0	0	0	9
–	3	0	
1	0	0	
0	0	5	5

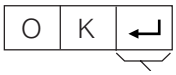
When “?” is input for some commands, the present setting value responds.

?			
?	?	?	?

Appendix

Response code format

Normal response



Problem response (communication error or incorrect command)

Commands

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POWER SETTING	POWR	0___	POWER OFF (STANDBY)
INPUT SELECTION A	ITGD	____	INPUT SWITCHING (TOGGLE)
	ITVD	____	TV (CHANNEL FIXED)
	IAVD	*___	INPUT1 – 5 (1 – 5)
CHANNEL	DCCH	**__	TV DIRECT CHANNEL (1 – 99)
	CHUP	____	CHANNEL UP
	CHDW	____	CHANNEL DOWN
INPUT SELECTION B	INP1	0___	INPUT1 (CVBS)
	INP1	1___	INPUT1 (RGB)
	INP2	0___	INPUT2 (CVBS)
	INP2	1___	INPUT2 (Y/C)
	INP3	0___	INPUT3 (CVBS)
	INP3	1___	INPUT3 (Y/C)
	INP3	2___	INPUT3 (RGB)
	INP3	3___	INPUT3 (COMPONENT)
	INP4	0___	INPUT4 (AUTO)
	INP4	1___	INPUT4 (S-VIDEO)
	INP4	2___	INPUT4 (VIDEO)
	INP5	0___	DIGITAL PC
	INP5	1___	ANALOGUE PC
	INP5	2___	DIGITAL AV
	INP5	3___	ANALOGUE AV
AV MODE SELECTION	AVMD	0___	TOGGLE
	AVMD	1___	STANDARD
	AVMD	2___	MOVIE
	AVMD	3___	GAME
	AVMD	4___	USER
	AVMD	5___	DYNAMIC
VOLUME	VOLM	**__	VOLUME (0 – 60)

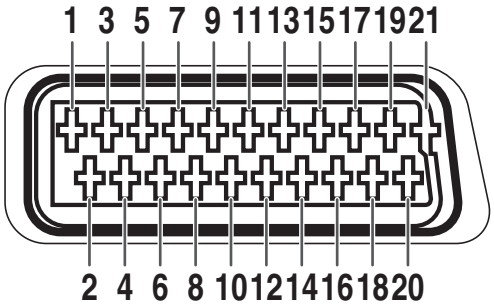
CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POSITION	HPOS	***_	H-POSITION (AV) (– 10 – + 10)
	HPOS	***_	H-POSITION (PC) (0 – 180)
	VPOS	***_	V-POSITION (AV) (– 20 – + 20)
	VPOS	***_	V-POSITION (PC) (0 – 100)
	CLCK	***_	CLOCK (0 – 180)
	PHSE	***_	PHASE (0 – 40)
WIDE MODE	WIDE	0___	TOGGLE (AV)
	WIDE	1___	NORMAL (AV)
	WIDE	2___	ZOOM 14:9 (AV)
	WIDE	3___	PANORAMA (AV)
	WIDE	4___	FULL (AV)
	WIDE	5___	CINEMA 16:9 (AV)
	WIDE	6___	CINEMA 14:9 (AV)
	WIDE	7___	NORMAL (PC)
	WIDE	8___	CINEMA (PC)
	WIDE	9___	FULL (PC)
	WIDE	10__	DOT BY DOT (PC)
MUTE	MUTE	0___	TOGGLE
	MUTE	1___	MUTE
	MUTE	2___	MUTE OFF
DOLBY VIRTUAL	ACDV	0___	TOGGLE
	ACDV	1___	ON
	ACDV	2___	OFF
DUAL SCREEN	TWIN	0___	DUAL SCREEN OFF
	TWIN	1___	DUAL SCREEN ON
AUDIO CHANGE	ACHA	____	TOGGLE
SLEEP TIMER	OFTM	0___	OFF
	OFTM	1___	SLEEP TIMER 30 MIN
	OFTM	2___	SLEEP TIMER 1 HOUR
	OFTM	3___	SLEEP TIMER 1 HOUR 30 MIN
	OFTM	4___	SLEEP TIMER 2 HOUR
	OFTM	5___	SLEEP TIMER 2 HOUR 30 MIN
TEXT	TEXT	0___	TEXT OFF
	TEXT	1___	TEXT ON (TOGGLE)
	DCPG	**__	DIRECT PAGE JUMP (100 – 899)

NOTE

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.

Connecting pin assignments for SCART

Various audio and video devices may be connected via the SCART terminals.



SCART (INPUT 1)

1. Audio right output (TV Monitor out)
2. Audio right input
3. Audio left output (TV Monitor out)
4. Common earth for audio
5. Earth for blue
6. Audio left input
7. Blue input
8. Audio-video control
9. Earth for green
10. Not used
11. Green input
12. Not used
13. Earth for red
14. Not used
15. Red input
16. Red/Green/Blue control
17. Earth for video
18. Earth for Red/Green/Blue control
19. Video output (TV Monitor out)
20. Video input
21. Plug shield

SCART (INPUT 2)

1. Audio right output
2. Audio right input
3. Audio left output
4. Common earth for audio
5. Earth
6. Audio left input
7. Not used
8. Audio-video control
9. Earth
10. AV LINK control
11. Not used
12. Not used
13. Earth
14. Not used
15. Chroma S-Video input
16. Not used
17. Earth for video
18. Earth
19. TV Monitor output
20. Video input/S-video input
21. Plug shield

SCART (INPUT 3)

1. Audio right output
2. Audio right input
3. Audio left output
4. Common earth for audio
5. Earth
6. Audio left input
7. Blue input
8. Audio-video control
9. Earth
10. Not used
11. Green input
12. Not used
13. Earth
14. Not used
15. Red input/Chroma S-Video input
16. Red/Green/Blue control
17. Earth for video
18. Earth
19. TV Monitor output
20. Video input/S-video input
21. Plug shield

Specifications

Item				32″ LCD COLOUR TV, Model: LC-32GA3E
LCD panel				32″ Advanced Super View & BLACK TFT LCD
Number of dots				3,147,264 dots (1366 × 768 × 3 dots)
Video Colour System				PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV Function	TV-Standard (CCIR)			B/G, I, D/K, L, L'
	Receiving Channel	VHF/UHF		E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch
		CATV		Hyper-band, S1–S41ch
	TV-Tuning System			Auto Preset 99 ch, Auto Label, Auto Sort
	STEREO/BILINGUAL			NICAM/A2
Brightness				450 cd/m²
Backlight life				60,000 hours (at Backlight Standard position)
Viewing angles				H : 170° V : 170°
Audio amplifier				10W × 2
Speakers				Ø 8 cm 2pcs, Ø 2.5 cm 2pcs
Terminals		Rear	ANTENNA IN	UHF/VHF 75 Ω Din type
			INPUT 1	SCART (AV input, RGB input, TV output)
			INPUT 2	SCART (AV input/output, Y/C input, AV Link)
			INPUT 3	SCART (AV input/output, Y/C input, RGB input), RCA pin (Component input)
			INPUT 4	S-VIDEO (Y/C input), RCA pin (AV input)
			INPUT 5	Ø 3.5 mm jack (Audio input), DVI-I (DVI-I input)
			AUDIO OUTPUT	RCA pin (Variable/Fixed), switchable with INPUT 4
			DC OUTPUT	DC 9V 7W MAX
			SPEAKER	External speaker output terminal (L and R)
			CENTRE CHANNEL INPUT	RCA pin
			RS-232C	D-sub 9pin male connector
		Front	Headphones	Ø 3.5mm jack (Audio output)
OSD language				English/German/French/Italian/Spanish/Dutch/Swedish/Portuguese/Finnish/Turkish/Greek/Russian/Polish
Power Requirement				AC 220–240 V, 50 Hz
Power Consumption				143 W (3 W Standby) (Method IEC60107)
Weight				16.2 kg (Display only), 19.5 kg (with Display and speaker), 24.1 kg (with Display, speaker and stand)
Accessories				Operation manual, Remote control unit (×1), AC cord (×1), "AAA" size battery (×2)

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Optional accessory

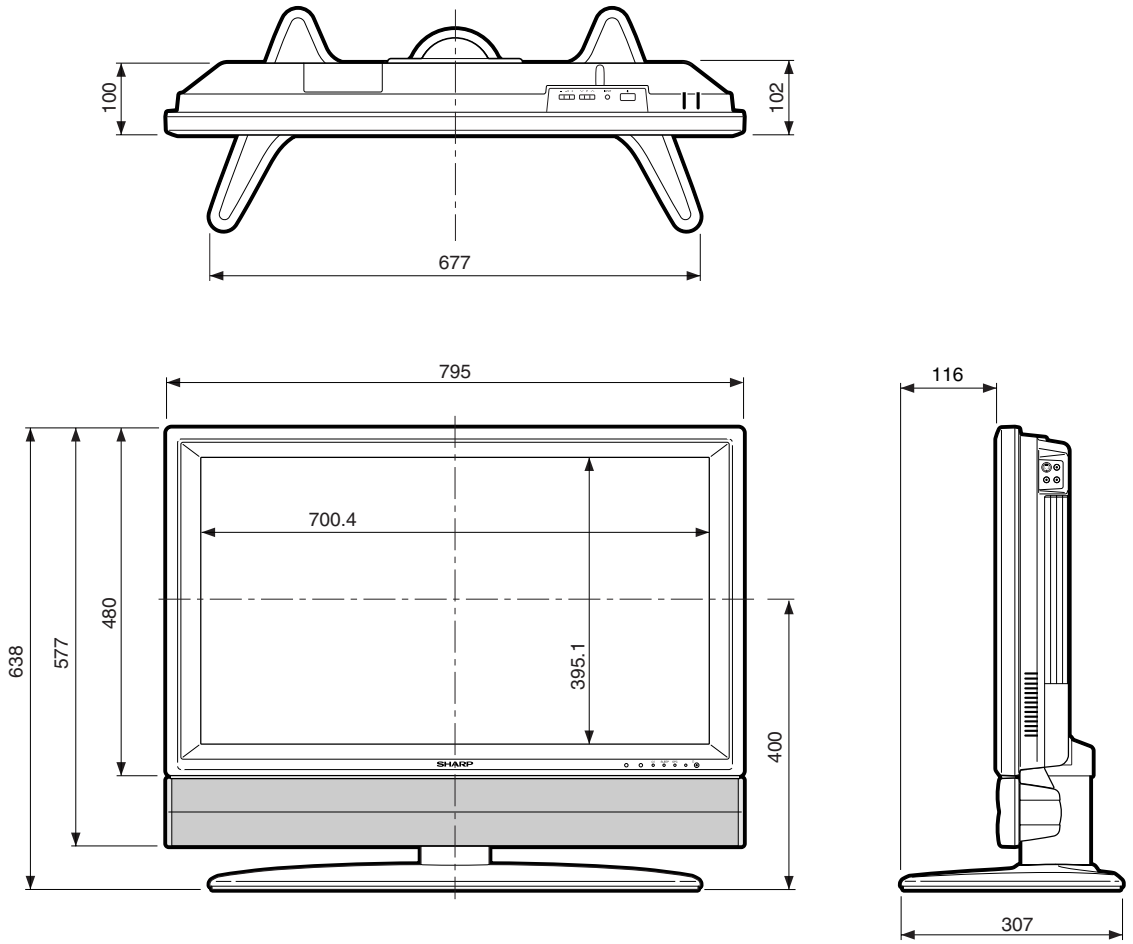
The listed optional accessories are available for the LCD colour TV. Please purchase them at your nearest shop.

- Additional optional accessories may be available in near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

No.	Part name	Part number
1	Wall mount bracket	AN-37AG2

Dimensional drawings

Unit: mm



Information for Customers on environmentally friendly disposal of this SHARP product

If this product cannot be used any more, it should be disposed of in a legally correct and environmentally sound way.

DO NOT DISPOSE OF THIS PRODUCT WITH YOUR HOUSEHOLD WASTE
OR MIXED WITH OTHER WASTES! YOU MIGHT ENDANGER THE ENVIRONMENT!

Sharp Corporation is committed to protecting the environment and conserving energy. Our goal is to minimize the environmental impact of our products by continually implementing and improving product technologies, designs, and customer information aimed at environmental conservation.

(1) For our customers in Belgium, The Netherlands, Sweden, and Switzerland

SHARP takes part in the respective national recycling systems for electronic equipment, which have been founded on the base of the environmental laws in these countries.

Please see here details on the respective countries.

Country	Recycling Information for that Country
Sweden	Please use the Swedish electronics recycling system called “ELRETUR”, and see the website at http://www.el-kretsen.se
The Netherlands	Please use the Dutch electronics recycling system called “ICT-Milieu”, and see the website at http://www.nederlandict.nl/index.php
Belgium	Please use the Belgian electronics recycling system called “Recupel”, and see the website at http://www.recupel.be
Switzerland	Please use the Swiss electronics recycling system called “SWICO”, and see the website at http://www.swico.ch

(2) For our customers in United Kingdom, Germany, France, and Italy

Please contact your local authorities for collection and recycling facilities, or contact a recycling service company, which is licensed for the recycling of electronic equipment.

HOW TO SET THE FACTORY PRESETS

Turn off the TV by pressing **POWER**.
Press and hold down **RESET** and press **POWER** on the TV to turn it on.
All setting items (except TV channel) return to the factory presetting.

You can run the Auto Installation again by using the following steps.

1 Turn on the power of the TV.
2 Press **MENU**. (Make sure the menu screen displays.)
3 Press ◀/▶ to select “Setup”.
4 Press ▲/▼ to select “Auto Installation”, and then press **OK**.
5 Press ◀/▶ to select “Yes”, and then press **OK**.

The PIN is | | | | | **.**

NOTE

- As a precautionary measure, make a note of your PIN above, scissor it from this manual, and keep it in a familiar place.

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